Γνῶθι Σεαυτόν
"Know Thyself"

MAN The MICROCOSM.

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MAN, THE MICROCOSM,

BY

ABRAHAM COLES, M.D., Ph.D., LL.D.,

WITH PORTRAIT OF THE AUTHOR AND FULL-PAGE ILLUSTRATIONS OF "AMBROSE PARÉ," "EDWARD JENNER," "ANDREAS VESALIUS," "WILLIAM HARVEY," "PROF. TULP AND HIS PUPILS" BY REMBRANDT, THE "APOLLO BELVEDERE," THE "VENUS DE MEDICI," "THEODOR BILLROTH AND HIS CLINICAL ASSISTANTS," ETC.

EDITED BY HIS SON

JONATHAN ACKERMAN COLES, A.M., M.D.

FIFTH (PHYSICIAN'S) EDITION.

NEW YORK:

D. APPLETON AND COMPANY

1892

SEP 3 1892

PS 1359
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1892a

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NEWARK, N. J.
ADVERTISER PRINTING HOUSE,
1892

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ILLUSTRATIONS.

Steel Engraving of Dr. Abraham Coles, by Alexander Hay Ritchie, - - Frontispiece

The Apollo Belvedere. Artotype copy of the original. - - - - - - - Opp. page 20.

This celebrated marble statue was found in the Fifteenth Century, at Antium (Capo d' Anzo), Italy, the birthplace of the emperor Nero, who is believed to have brought it to Antium from the Sacred Shrine at Delphi. Delphi, situated on the southern side of Mount Parnassus, was, to a certain extent, protected by the sanctity of its oracle and the presence of its god. According to Herodotus, the vast riches accumulated in the temple at Delphi (City of the Sun) led Xerxes, after having forced the pass of Thermopylæ, to attempt its capture. The effort, however, is said to have failed, by reason of the intervention of Apollo. The sculptor of this wonderful statue is unknown. It was placed through Michael Angelo in the Belvedere of the Vatican. It was taken by the French to Paris in 1797, but was restored to Rome in 1815.

Andreas Vesalius, - - - - Opp. page 24

He was born in Brussels in 1514; began his studies in Louvain and prosecuted them in Italy. He made himself master of Hebrew, Greek and Arabic at the age of twenty. When only twenty-eight years old, he published his great work on Anatomy, *De Corporis Humani Fabrica*. Senac calls it the discovery of a new world; and Haller speaks of it as "an immortal work by which all that had been written before was almost superseded." In it he exposed the errors of the Galenian school, and broke the spell which for so many ages had held the medical world in thraldom. The work met with

the fiercest opposition, but the author's reputation steadily increased. In 1544 he was made chief physician to the Emperor Charles V, and afterwards to Philip II. In 1563 or 1564 he suddenly left Madrid to make a pilgrimage to Jerusalem, for reasons not certainly known. The common story is that while he was examining the body of a Spanish nobleman who had died under his charge, as he laid open the chest, the bystanders imagined they saw a tremulous motion of the heart, whereupon he was denounced to the Inquisition as guilty of murder and impiety. Where superiority of knowledge was esteemed a crime, however innocent, he was sure to be condemned, but through the influence of Philip, his punishment was commuted to a pilgrimage. On his voyage back to accept the Paduan professorship of Anatomy, tendered him by the Venetian senate, he was wrecked on the Island of Zante, where, it is said, he died of starvation, October 15, 1564.

The original painting is the work of the French artist, F. Hamman. Its design, as we construe it, is to illustrate the pious spirit in which the great anatomist was accustomed to begin his investigations. With eyes turned reverently upward to a crucifix on the wall, he prefaces the work of dissection with devout prayer to the Divine Redeemer, the Incarnate Word, Maker of all things, Lord of life, Lord also of the Sciences, and "that True Light which lighteth every man that cometh into the world." This view of the design of the picture makes its accommodation to the purposes of the entire poem obvious and easy. Possibly, by a stretch of courtesy, the invocation found on the twenty-fourth page may be allowed to stand for the prayer supposed to be offered.

"Dear God! this body, which, with wondrous art," &c.—P. 24.

REMBRANDT'S "LESSON IN ANATOMY." Prof. Tulp and his Pupils. All Portraits. 1632. - Opp. page 31.

The original of this picture is found at the Hague. It formerly stood in the Anatomy School of Amsterdam, but was purchased by the King of Holland for 32,000 guilders (£2,700). It is described as a "most wonderful painting and one of the artist's finest works." Sir Joshua Reynolds remarks: "To avoid making it an object dis-

agreeable to look at, the figure is but just cut at the wrist; showing the *flexor muscles* of the fingers. There are seven other portraits, colored like nature itself, fresh and highly finished; one of the figures behind has a paper in his hand on which are written the names of the rest, with Rembrandt's own, and the date 1632. The dead body is perfectly well drawn (a little foreshortened) and seems to have been just washed. Nothing can be more truly the color of dead flesh. The legs and feet, which are nearest the eye, are in shadow; the principal light which is on the body is by that means preserved of a compact form."

> "The subject MUSCLES, girded to fulfill
> The lightning mandates of the sovereign will,—
> Th' abounding means of motion, wherein lurk
> Man's infinite capacity for work."

HARVEY DEMONSTRATING TO CHARLES I HIS THEORY OF THE CIRCULATION OF THE BLOOD, - Opp. page 67.

William Harvey was born in Folkstone, England, April 1, 1578; died in London, June 6, 1657. In 1628, he published his great discovery, made, it is said, but not matured, nine years before, in a work entitled *Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*, and dedicated it to Charles I. He lived to be considered as the first anatomist and physician of his time, and to see his discovery universally acknowledged.

The original of the above picture is by an English painter (Robert Hannah).

> "Make room, my HEART, that pour'st thyself abroad,
> Deep, central, awful mystery of God!
> * * * * *
> Where Auricle and Ventricle with power
> Repeat their grasp five thousand times an hour."

THE VENUS DE MEDICI. By Cleomenes, the Athenian. B. C. 200. - - - - - Opp. page 70.

This famous antique marble statue was exhumed in the villa of Hadrian, near Tivoli, in the Seventeenth Century, in eleven pieces. After remaining for some time in the Medici palace at Rome, it was

taken to Florence and is now in the "Tribune." It was in the Louvre at Paris from 1796 to 1815. "From its exquisite proportions and perfection of contour, the Venus de Medici has become the most celebrated standard of female form extant."

The following rules obtained by measurements of Greek statues are adopted by sculptors:

"FIRST—As to height, tastes differ, but the Venus de Medici is about five feet five inches in height. This is held by many sculptors and artists to be the most admirable stature for a woman. For a woman of this height, one hundred and thirty-eight pounds is the proper weight, and if she be well formed she can stand another ten pounds without greatly showing it. When her arms are extended she should measure from tip of middle finger to tip of middle finger just five feet five inches, exactly her own height. The length of her hand should be just a tenth of that, and her foot just a seventh, and the diameter of her chest a fifth. From her thighs to the ground she should measure just what she measures from the thighs to the top of the head. The knee should come exactly midway between the thigh and the heel. The distance from the elbow to the middle finger should be the same as the distance from the elbow to the middle of the chest. From the top of the head to the chin should be just the length of the foot, and there should be the same distance between the chin and the armpits. The waist measure twenty-four inches, and the bust thirty-four inches, if measured from under the arms, and forty-three if over them. The upper arm should measure thirteen inches and the wrist six. The calf of the leg should measure fourteen and one-half inches; the thigh, twenty-five, and the ankle, eight. There is another system of measurements which says that the distance twice around the thumb should go once around the wrist; twice around the wrist, once around the throat; twice around the throat, once around the waist, and so on.

As for coloring and shape, here is the code laid down by the Arabs, who say that a woman should have these things: BLACK—Hair, eyebrows, lashes and pupils. WHITE—Skin, teeth and globe of the eye. RED—Tongue, lips and cheeks. ROUND—Head, neck, arms, ankles and waist. LONG—Back, fingers, arms and limbs. LARGE—Forehead, eyes and lips. NARROW—Eyebrows, nose and feet. SMALL—Ears, bust and hands."

AMBROSE PARÉ (1509–1590). "The Father of French Surgery," - - - - - - Opp. page 75.

Brantoine relates that Henry III took good care to shield his surgeon (Paré), who was suspected of being a Huguenot, from the dangers of St. Bartholomew's night, keeping him in his own room and motioning him not to move therefrom. Theodor Billroth says Paré's treatises on the treatment of gun-shot wounds are classical, and he has rendered himself immortal by the introduction of the ligature for bleeding vessels after amputation.

EDWARD JENNER (1749–1823), - - Opp. page 77.

Edward Jenner had his attention directed to the discovery of vaccination as a preventive of smallpox by hearing a young milk-maid say she could not take the disease because she had already had the cowpox. Upon investigation, he "satisfied himself of the efficacy of inoculation with the virus of the cowpox to prevent smallpox, and next ascertained, with equal certainty, that the former disease could be communicated from one human being to another, without having recourse to the original vaccine matter." In 1858 a statue of Jenner was placed in Trafalgar Square, London.

PROF. THEODOR BILLROTH, M. D., AND HIS CLINICAL ASSISTANTS, Vienna. - - - Opp. page 78.

"Each year adds something—many things ye know
Your sires knew not a hundred years age."—Page 78.

PREFACE.

THE following Address and Poem were delivered before the Medical Society of New Jersey at its Centennial Meeting, held in Rutgers College, New Brunswick, N. J., January 24, 1866, and published with its Transactions. Prepared amid the hurry and distractions of other duties, and with special reference to the demands and limitations of the occasion, the Poem, as originally delivered, fell short of the author's design, which was to produce, if possible, a tolerably complete compendium of that noblest, most necessary, and yet, strange to say, that most neglected of all the sciences—Anthropology—relieved of some of the dryness belonging to the ordinary modes of presentation.

The hope of supplying in some measure existing deficiencies, led the author, after the manuscript had passed into the hands of the printer, to avail himself of the short intervals which transpired between the receiving and returning of the proofs, to castigate some parts

and expand others not sufficiently developed, so that besides alterations there have been additions to the amount of two hundred lines and more since that first reading. He regrets that the hurry of the press joined to the hurry arising from other causes, afforded so little opportunity for putting in practice the sound inculcation of Horace, concerning the duty of delay and careful finish: *limæ labor et mora*. With more time at his disposal, he thinks he could have done better justice to the fine capabilities of a subject, which the writers of verse, ransacking heaven and earth for a theme, have hitherto for the most part strangely overlooked. This remarkable omission is the more to be wondered at, because many of our best poets have been physicians; and for some reason or other

> "the wise of ancient days adored
> One power of Physic, Melody and Song."

Dr. Armstrong's well-known Poem in four books, written in blank verse, and first published in 1744, entitled, "The Art of Preserving Health," does, indeed, treat partially and incidentally of physiological

matters, and may therefore be regarded as forming in some sort an exception to the general rule of neglect affirmed above. It has for its topics—Air, Diet, Exercise and the Passions—discussed of course, in conformity with the design of the Poem, according to their sanitary bearings, each forming the subject of a separate book. The work was everywhere read and admired; and remains to this day, according to the poet Campbell, "the most successful attempt in our language to incorporate material science with poetry."

While the critic admits that "the practical maxims of science, which the Muse has stamped with imagery and attuned to harmony, have so far an advantage over those delivered in prose, that they become more agreeable and permanent acquisitions of the memory," he, in common with others, seems to think, that there inhere in such subjects, nevertheless, difficulties of a most formidable kind, a perversity and stubbornness of nature, which are never overcome except by some rare felicity of fortune or surprising exertion of genius. Hence he says: "the author's Muse might be said to show a professional intrepidity in choosing her subject;

and, like the physician, to prolong the simile, she escaped on the whole with little injury. * * * What is explained of the animal economy is obscured by no pedantic jargon, but made distinct and to a certain degree picturesque to the conception." So too in his final summing up of the merits of the Poet, he does not fail to emphasize that special one, due "to the hand which has reared poetical flowers on the dry and difficult ground of philosophy."

But there is another and much older example of this morganatic marriage, as some might call it, between poetry and natural science—one antedating the Christian era and the time of Virgil. Lucretius, born in the year before Christ 95, composed a Latin poem in heroic hexameters, entitled *De Rerum Natura*. It is divided into six books; and is based on the doctrines of Epicurus, who taught that the world was formed from a fortuitous concourse of atoms.

The first two books expound the nature and properties of these ultimate atoms or seeds of things, varying in shape and infinite in number, moving in void space infinite in extent, with great swiftness, some in right

lines, others declining therefrom, until united to each other after innumerable tentative contacts, all the objects in the universe are generated—which objects form the subject matter of the remaining four books.

The third book is taken up with a description of the mind (animus) and soul (anima) maintaining that both are corporeal, acting on the body by material impact; that the substance of the mind and soul is not simple, but composed of four subtle elements—heat, vapor, air, and a nameless fourth substance on which sensibility depends, and is, so to speak, the soul of the soul; that the soul cannot be separated from the body without destruction to both, and that death is the end of man.

The fourth book treats of the senses, averring that images* of exquisite subtlety are constantly emitted (shed, peeled off as it were) from the surface of objects,

* Democritus first, Epicurus afterwards called these *εἴδωλα καὶ τύπους*, i. e. eidola and types; Cicero, images; Quintilian, figures; Catius, spectres; Lucretius, effigies, images, simulacra, species, figures, exuviæ, spoils, *quasi* membranes, cortices, etc. Epicurus and Lucretius supposed spectres of the dead to be pellicles thrown off from corpses which were so thin as to pass through coffins and all other obstructions.

which flying everywhere and impinging on the organs of sight produce vision; that voice and sound are corporeal images, (as proved by their abrading the throat after long or loud speaking,) which strike the ear and produce hearing. Taste and odors are accounted for; and imagination and thought traced to images which penetrate the body through the senses. Sleep is next spoken of, and the various causes of dreams—the book closing with a discourse on love and matters pertaining thereto.

The fifth book treats of the origin of the world—land, sea, sky, sun, stars, the movements of the heavens, the changes of the seasons and the progress of man, society, institutions and sciences—while the sixth book, being the last, attempts an explanation of the most striking natural appearances, such as lightning, thunder, clouds, rainbow, snow, wind, hail, earthquakes and volcanoes, concluding with a discourse on diseases, and a learned and elegant description of a pest which in the time of the Peloponnesian war desolated Athens.

The philosophy of this celebrated Poem is of course false and absurd, but in regard to its poetical merit

there can be but one opinion. The poet's mastery over his materials is complete. Under his magic touch, speculations the most abstruse and technicalities the most refractory, lose their intractableness, and are converted into forms of exquisite beauty and grace. Great, undoubtedly, are the attractions of a virgin theme. It added to the rapture of Milton, "soaring in the high reason of his fancy with his garland and singing robes about him," the knowledge that he pursued

"Things unattempted yet in prose or rhyme."

So Lucretius, in the opening lines of the fourth book, does not conceal his satisfaction that he is first in the field:

"Avia Pieridum peragro loca, nullius ante
Trita solo: juvat integros adcedere funteis
Atque haurire; juvatque novos decerpere flores,
Insignemque meo capiti petere inde coronam,
Unde prius nulli velarint tempora Musæ."*

* The Muses' pathless places I explore,
Worn by the sole of no one's foot before:
'Tis sweet to untouched fountains to repair
And drink; 'tis sweet to pluck new flowers; and there
To seek a famous chaplet for my brow
Whence have the Muses veiled no head till now.

The literalness of this translation must atone for its lack of elegance.

The author of the Microcosm, enjoying, in common with these great masters of song, the felicity of a subject unprofaned by previous handling, regrets that he does not possess their power to do it justice. He thinks it strange—that while amid the ignorances and the vanities of a false philosophy two thousand years ago, the poet's heart, instinctively discerning the excellent beauty there is in God's works, *veras pulchritudines rerum*, was stirred to sing, and in such a manner as to charm the ear of the world

> " Principio cœlum ac terras, camposque liquentes,
> Lucentemque globum lunæ, titaniaque astra
> Spiritus intus alit; totamque infusa per artus
> Mens agitat molem et magno se corpore miscet "—

no one has been found in these last days, after so long waiting, sufficiently kindled and inspired by the exciting discoveries and revelations of modern science, to undertake the task of lifting them into the sphere of poetry, and glorifying them with its light. If there is nothing so mean but it has a divine side—if materials for poetry be not wanting in the most common things, a floating cloud, a spear of grass, or a handful of dust

even—how much more may this be said of so lofty a subject as Man, "the mirror of the power of God" reflecting His Maker's image in every part, in the minutest blood-disk and elementary cell, no less than in the complex whole of his most wonderful organism! In short, if it be the proper business of Poetry to deal with subjects of human interest, what can be more human than humanity itself? Or if its high aim be to discover throughout creation the dazzling tokens of the Beautiful, the *τὸ καλὸν* which is only another name for the Divine, where else in all the universe do the shining footprints of the First Good and the First Fair appear so radiant or so recent as in His last and crowning work, the Human Form? The failure of the present attempt to show it, would prove nothing against the grand poetic possibilities of such a theme. Still it would be true

> "How charming is divine philosophy?
> Not harsh, and crabbèd, as dull fools suppose,
> But musical as is Apollo's lute,
> And a perpetual feast of nectared sweets
> Where no crude surfeit reigns."

THE MICROCOSM.

"KNOW THYSELF."

"It is most true that of all things in the universe man is the most composite, so that he was not without reason called by the ancients Microcosm, or the little world (Mundus Minor)"—BACON.

"What a piece of work is Man! How noble in reason! how infinite in faculties! in form and moving, how express and admirable! in action, how like an angel! in apprehension, how like a God!"—SHAKESPEARE.

"I esteem myself as composing a solemn hymn to the Author of our bodily frame, and in this I think there is more true piety than in sacrificing to Him hecatombs of oxen, or burnt offerings of the most costly perfumes, for I first endeavor to know Him myself, and afterwards to show Him to others, to inform them how great is His wisdom, His virtue, His goodness."—GALEN.

"I will praise Thee; for I am fearfully and wonderfully made."
—DAVID.

ADDRESS

DELIVERED BEFORE THE

Medical Society of New Jersey

AT ITS

CENTENARY ANNIVERSARY,

JANUARY 24TH, 1866,

BY

ABRAHAM COLES, M. D.

ADDRESS.

THE Medical Society of New Jersey, hoary with the frosts of a hundred winters, and mindful of its just honors as the oldest organization of the kind on the Continent, has here met, in a place not far from the spot where it was first cradled, to celebrate by special and festal observances, this its first Centenary Anniversary.

It certainly affords remarkable proof of original vigor, and reflects infinite credit upon its earlier and later membership, that, except for a brief space during the Revolutionary War, the Society has never failed to hold regular meetings. In the midst of a thousand changes, the throes of revolution, and the fall of empires, it has stood unmoved. Nations have been born since it came into being. It is older than the Republic. At the time of its formation, its founders were living under British rule, not dreaming of revolt.

If they shared in the popular ferment caused by the passage of the odious Stamp Act by Parliament a few months before, they probably had no expectation of seeing matters pushed to the point of open rupture, and forcible separation from the mother country.

The first stone of the Temple erected to Freedom had not yet been laid. The Society was some years old when the first blow for Independence was struck. Lexington and Concord,

> "Where once the embattled farmers stood,
> And fired the shot heard round the world,"

were insignificant villages unknown to fame. The brain that conceived the Declaration of Independence was probably revolving far other ideas. On the dazzled mind of no seer or statesman had dawned the unparalleled splendors of the Nation that was to be—the constellar glories of that Imperial Commonwealth, composed of a resplendent Sisterhood of States, mighty and populous and ever increasing, joined indissolubly together so as to form one vital organic whole, *E pluribus Unum*, such as is witnessed to-day.

Those fourteen physicians and surgeons, (let their names be always mentioned with honor,) who, foremost in an enlightened appreciation of the advantages accruing to science and humanity from such an organization, on the 23d of July, A. D. 1766, laid the foundations of this Society—have long since passed away. "After they had served their own generation by the will of God they fell on sleep, and were laid unto their fathers." How inspiring the vision, could they have been permitted to penetrate the future and foresee all that has since happened; the mighty changes which have taken place; the struggles and triumphs by means of which this divinely favored and foreordained Nation has been gloriously carried forward to the culminating felicity of the present time, when Peace once more smiles through all the land—a glad and righteous Peace—and Slavery, its deadliest foe, the inextinguishable cause of strife and hatred, ever at work to mar

"The unity and married calm of States,"

has, albeit at an immense cost of treasure and blood, by a perpetual and unalterable constitutional enactment,

been banished and driven out of every part of the national domain. How amazing the contrast between now and then! Then there were no railroads, no steamships, no telegraphs, no Hoe's lightning printing presses, no photography, no chloroform. In like manner who can tell what new and startling discoveries will be made in the centuries to come. Methinks

"It were a pleasant thing
To fall asleep with all one's friends,
To pass with all our social ties
To silence from the paths of men,
And every hundred years to rise
And learn the world, and sleep again,
To sleep through terms of mighty wars,
And wake on science grown to more,
On secrets of the brain, the stars,
As wild as aught of fairy lore,
And all that else the years will show,
The Poet-forms of stronger hours,
The vast Republics that may grow,
The Federations and the Powers.

* * * * * *

So sleeping, so aroused from sleep,
Through sunny decades new and strange,
Or gay quinquenniads, would we reap
The flower and quintessence of change."

Members of the Society! called to address you in the character of President on an occasion so extraordinary, I can say with all sincerity, that however grateful it may be to my feelings to be the recipient of so distinguished an honor, the gratification is largely tempered with the fear that I may not be able to justify the partiality of your selection. My misgivings, I confess, are greater, because of my having ventured upon untrodden paths, and attempted the novelty of a poetical excursion into the arduous fields of human physiology, where few flowers are supposed to bloom. The poetical form, however, may fairly claim this advantage in justification of its adoption, that it allows a more fervid expression of those feelings of devout awe and amazement which the study of the wonders of the human economy is so well fitted to excite.

I offer no apology for mixing up my Religion with my Science; and make no concealment of the fact, but glory in avowing it, that these are Christian, both one and the other. Nor do I regard it as a just matter of reproach that I make my creed so dominant and positive. Believing firmly that the Christ that redeemed

me is the God that made me; not knowing nor desiring to know any other God but Him, I am accustomed to make Him an essential part of all knowledge, discover Him in every discovery of Science, and count all truth dead until He vitalizes it. Any Science of Life, which is not based on the recognition of the fact that "in Him we live and move and have our being," I reckon essentially defective.

A Physiology which has to do with decomposing corpses, rather than living men and women; that puts these into retorts and distils them; or peeps and peers at the minutest shreds and specks of dead tissue through a microscope, and determines a cell to be the ultimate fact of structure, however true, has no right, I conceive, to be supercilious towards those, who, without rejecting what is thus discovered, find room for other things, things that pertain to the spiritual side of humanity, the indubitable facts of consciousness, a soul that soars and delights in freedom, and is not so in love with smallness, as willingly to be cooped up forever into so minute and microscopic a circle, corresponding to a cypher, the symbol of nothingness, to

which indeed it closely approximates. So that if it comes to pishing and poohing, others, for aught we can see, have as good a right to pish and pooh as those who arrogate so much; the Sadducees of science, who believe in neither angel nor spirit, and are able to find nowhere anything worthy of worship; in this respect, showing themselves to be more heathenish than the heathen.

The great Galen, albeit an unbaptized pagan, who lived and wrote in the second century, after reviewing the structure of the hand and foot, and their adaptation to their respective functions, treats us to the following eloquent outburst of pious feeling, breathing a spirit not unworthy of Christianity itself: "I esteem myself as composing a solemn hymn to the Author of our bodily frame, and in this I think there is more true piety than in sacrificing to Him hecatombs of oxen, or burnt offerings of the most costly perfumes, for I first endeavor to know Him myself, and afterwards to show Him to others, to inform them how great is His wisdom, His virtue, His goodness."

This noble utterance, so honorable to the head and

heart of one, who, for 1400 years, ruled from his urn in the great schools of medicine throughout the civilized world with an authority so absolute, that it was reckoned a crime to question it in the smallest particular—sets forth so truly the design I had in view in the following Poem, that I have chosen it as a motto, in connection with that other apothegm of Greek wisdom, "Know Thyself." I style my Poem, "The Microcosm," and in order that I may be more easily followed in the reading of it, I beg to premise an outline of its plan in the following

ANALYSIS.

The Poem begins with speaking of Man as the Archetype or ideal exemplar of all animals, whose coming was foretold in a long series of Geologic prophecies from the creation of the paleozoic fishes; and then passes to notice a remarkable anticipation of this accepted doctrine of modern science in the 139th Psalm —Owen, Agassiz and other great lights of Comparative and Philosophical Anatomy agreeing in this—that while man was the last made he was the first planned

of all animals—it being easy to trace even in the fins of the fish, a marked resemblance in structure to the bones composing the human arms of which they are homologues—fins, in other words, being imperfect arms, arms in their most rudimentary condition.

In speaking of the supreme dignity of the human form, viewed as a whole, and of man existing *in* God as well as *of* God, occasion is taken to animadvert upon the atheistic tendency of certain materialistic teachings. After which the component parts of the Human Body are taken up in detail, beginning with—I. the SKIN, as its outermost covering and face, (expressing the passions, &c.,) composed of three layers. Below the Skin lie—II. the MUSCLES, the Organs of Motion, directed by the Will, acting through nervous channels of communication with—III. the BRAIN, as the Common Sensory, and seat of this, and the other Faculties of the Mind, such as the Understanding, the Religious Sense, Memory, Imagination and Conscience. A secretory function is attributed to the great Ganglions of the Brain (the Gray Substance) of a hypothetical Nervous Fluid which fills the whole body.

The Mind being dependent for its perceiving power on the Organs of the Senses, leads to a consideration of—IV. the EYE in its relation to Light, also to Tears and Sleep. After glancing at the analagous relations subsisting between the Soul and Truth, mention is made of the Founders of Asylums for the Blind; also of Asylums for the Deaf and Dumb. Next comes—V. the EAR in its relation to Sound and Music; and then by a natural transition—VI. the HUMAN VOICE, as being the most perfect of musical instruments. The Mouth and Nose, being concerned in Articulation, brings up—VII. TASTE, and—VIII. SMELL. The final cause of Taste being the repair of the Waste the body is constantly undergoing, there follows a description of—IX. INGESTION, DIGESTION and ASSIMILATION. The Chyle received into the Blood is conveyed to the right side of the HEART, which, besides being the grand Organ of—X. the CIRCULATION and indirectly of NUTRITION, is the reputed seat of—XI. the AFFECTIONS, and stands in general speech as a synonym of LOVE under its manifold manifestations.

Having noticed the coloring or modifying power of

the Viscera in giving Love its distinctive character, as exemplified in Maternal Love and the Love of the Sexes, occasion is taken to speak of—XII. WOMAN, as distinguished from Man. Of Charity, which is Love in action, or Love viewed in its practical aspect, an apt illustration is found in the devotion and self-denying labors of—XIII. the Conscientious PHYSICIAN. Reference is made to—XIV. CHRIST as the Great Physician of Souls; and to—XV. DEATH in that aspect of brightness which it bears to the believer.

THE MICROCOSM.

Γνωθι σεαυτον.

Geologic Prophecy of Man's Coming.

O WHAT a solemn and divine delight
To pierce the darkness of primeval night—
Through countless generations upward climb
To the first epochs of beginning time;
Back, through the solitude of ages gone,
To the dim twilight of Creation's dawn;
To the dread genesis of heaven and earth,
When pregnant Deity gave Nature birth;
Borne on swift pinions, till our feet we place
Upon the undermost granitic base
Of the round world; and, awe-struck, standing there,
Where all is lifeless, desolate and bare,

Behold the forming of earth's upper crust,
Built up of atoms of once living dust;
Layer on layer rising, rock on rock,
Through lapse of years that numeration mock;
Where lie, in stony sepulchres forgot,
Gigantic organisms that now are not;
And all the various forms of life prevail,
From low to high, in an ascending scale,—
Mollusk and fish, then reptile, and then bird,
So on to mammal, each o'er each interred—
All pointing forward, in the eternal plan,
To the ideal, archetypal MAN!

Scriptural Anticipation of the Doctrine.

How oft, what's plain and patent in the Word
Is by slow Science painfully inferred!
The truth she took long centuries to unfold,
Had she but known it, was already told.
See, with what ease the Psalmist now unlocks
The secret of the paleozoic rocks;
Inspiring insight given him, to see
The drift and meaning of the mystery;
His, the discoveries of modern boast,
By revelation of the Holy Ghost;

In correspondence, literally exact
With geologic inference and fact,
O'erwhelmed with fear and wonder, hear him speak :*

"O Omnipresent One ! in vain I seek
To bound Thy being, get beyond Thee, go
Where Thou, the Infinite, art not,— Oh, no !
If I ascend to heaven, I find Thee ; or in hell
I make my bed, I find Thee there as well ;
There is no hiding place from Thee ; yea, in the dark
Thou seest me, nor need'st the sun—that spark
Which the insufferable splendor of Thine eye
Did kindle—to reveal me or descry ;
Thou hast possessed my reins ; didst give me room,
Growth and development in my mother's womb ;
My substance was not hid from Thee, when I
Was made in secret, and was curiously
In the earth's lowest parts and strata wrought ;
My perfect whole, was present to Thy thought
While yet imperfect, and, in Nature's book
My members were prefigured ; each thing took
My embryonic likeness ; fish's fin,
By virtue of relationship and kin,

* Psalm cxxxix.

APOLLO BELVEDERE.
From the Original Statue.

Proclaim thee ruler, destined to command.
A little lower than the angels made,
Dominion, glory, worship on thee laid,
I praise not thee, but honor and applaud
The handiwork and masterpiece of God.
Fearful and wonderful, and all divine,
Where two worlds mingle, and two lives combine—
A dual body, and a dual soul,
Touching eternity at either pole—
The tides of being, circling swift or slow,
'Tween mystic banks that ever overflow,
Exist not severed from the Fountain-head,
But whence they rise, eternally are fed :
Our springs are all in God; from Him we drink,
Live, move, and have our being, feel and think.

Christian Science.

I value Science—none can prize it more—
It gives ten thousand motives to adore.
Be it religious, as it ought to be,
The heart it humbles, and it bows the knee;
What time it lays the breast of Nature bare,
Discerns God's fingers working everywhere ;
In the vast sweep of all embracing laws,

Finds Him the real and the only Cause ;
And, in the light of clearest evidence,
Perceives Him acting in the present tense—
Not as some claim, once acting but now not,
The glorious product of His hands forgot,
Having wound up the grand automaton,
Leaving it, henceforth, to itself to run.

Infidel Science.

If I mistake not, 'tis in this consists
The common folly of the specialists.
Bigots of sense, they, with unwearied pains
Searching for soul, find something they call brains;
Happy the mystery of life to tell,
By help of glasses, they announce a cell ;
And thereupon they would the world persuade
They know exactly how that man is made ;
'Tween nought and nought, his origin and end,
A cell is all, and all on this depend ;
They pare his being, make it less and less,
Until they reach the goal of nothingness.
Their boasted methods failing to find out
The soul's high essence, they affect to doubt ;
To their own notions obstinately wed,

They vainly seek the living 'mong the dead ;
By learning mad, these noodles of the schools
Are but a kind of higher class of fools.
Who follows matter through its countless shapes,
While still it vanishes and still escapes ;
O'er eagerly pursues the flying feet
Of natural causes farther than is meet,
Losing all trace, and drawing thence too near,
Into the bottomless obscure falls sheer ;
With atheistic cant, then God ignores,
And turns the Maker fairly out of doors ;
Deems certainties of consciousness weigh less
Than the presumptions of a learned guess.

Common Sense.

Presumptuous though it be, I, with a calm
Audacity of faith, believe I am ;
Nor venture with a Maker to dispense,
But trust the sanities of Common Sense ;
Hold life, despite of failure to extract,
A thing of firm reality and fact ;
Accept the truth, engraven on my heart,
I have a spiritual and immortal part.
If this great universe is a deceit,

PAINTED BY E. HAMMAN. A. MOUILLERON, LITH.

ANDREAS VESALIUS.
(1514—1564.)

Each Tissue woven in the loom of God!
Compared with that magnificence of dress,
Wherewith is clothed the Spirit's nakedness,
O how contemptible and mean a thing,
The purple and fine linen of a king!
The spotless vesture of the silky SKIN,
Outside of all, and covering all within,
With what a marvellous and matchless grace,
Is it disposed and moulded to each place;
Bounding and beautifying brow and breast,
A crowning loveliness to all the rest!
Endowed with wondrous properties of soul
That interpenetrate and fill the whole—
A raiment, moral, maidenly and white,
Shamed at each breach of decency and right,
Where dwells a charm above the charms of sense,
Suggestive of the soul's lost innocence.

Pathognomy.

Who has not seen that Feeling, born of flame,*
Crimson the cheek at mention of a name?
The rapturous touch of some divine surprise

* Aristotle calls Love, "τι θερμὸν πρᾶγμα"—a certain fiery thing.

Flash deep suffusion of celestial dyes ;
When hands clasped hands, and lips to lips were pressed,
And the heart's secret was at once confessed ?
Lo, the young mother, when her infant first
Gropes for the fountain whence to quench its thirst ;
With outstretched tiny hands, to eager lips
Conveys the nipple, and the nectar sips ;—
As on her yearning breast, she feels the warm
Delicious clasp of its embracing arm,
How thrills the bosom, and how streams the wine !
How her frame trembles with a Joy divine !
Not Joy, not Love alone here take their rise,
The chosen seat of mighty sympathies ;
Electric with all life, Religious Awe
Here holds its empire and asserts its law.
At dead of night when deep sleep falls on men,
Terror and trembling came upon me ; then
A spirit passed before my face ; the hair
Stood up upon my shuddering flesh—and there
Was silence—all my bones did shake—
A voice the preternatural stillness brake :
"Shall mortal man, whose origin is dust,
Arraign his Maker, claim to be more just ?"
Contending Passions jostle and displace

And tilt and tourney mostly in the Face ;
Phantasmagoric shapes appear and pass,
Distinctly pictured in that magic glass ;
Their several natures, instantly imbued
With the complexion of the changeful mood—
Ashes of Grief, and pallor of Affright,
Blackness of Rage, and Hatred's wicked white,
The immortal radiance of Faith and Hope,
Like that which streamed on Stephen's from the cope ;
The hidden depths of being, stirred below,
Thoughts, passions, feelings, upward mount for show ;
Unmatched by Art, upon this wondrous scroll
Portrayed are all the secrets of the Soul ;
Upon this palimpsest, writ o'er and o'er,
Each passing hour is busy penning more ;
Events, that make the history within,
There published on the surface of the Skin.

Interior View—Skin Dissected.

What lies below this beautiful outside?
What proofs of power and wisdom does it hide?
To eyes instructed and divinely keen,
The Shekinah, the Cherubim between,
Was not more visible than the Godhead here,

Nor spake more audibly to human ear.
For from the centre to this far extreme,
And corporal shore of being, Love supreme
Its miracles magnificent has wrought,
Embodying the Maker's perfect thought.
Would you explore the Mysteries of Life?
Dissect in fear, use reverently the knife—
All was made sacred to some holy use,
Whate'er the profanations of abuse—
Cut not with blundering and careless hand,
If you the fleshly maze would understand;
For that the task is difficult, it needs
The skill and knowledge which experience breeds.

Blending of Contraries—Structural Details.

Now that the Dermal Covering is cut through,
And its interior structure brought to view,
Pause, if you will, and let your aided sight
Peruse the wonders of Creative Might.
Admire the skill that can in one combine
A Sensibility and a Touch so fine—
Making the Skin throughout the purpose serve
Of one ubiquitous great surface nerve,
That finest needle, would it entrance gain,

Must pierce the sense and stab the soul with pain ;
Where camping armies of papillæ wait,
Manning each fortress, guarding every gate,
Armed at all points, and vigilant as fear,
To sound th' alarm when danger hovers near—
And yet, despite this nicety of sense,
Formed for coarse uses, and for rough defense ;—
An imbricated Armor, scale on scale *
Twelve thousand millions form a coat of mail,
Flexile and fine, or horny else and hard,
The trembling nakedness of sense to guard ;
A colored Retè delicately spun,
Quenching the fiery arrows of the sun,
Spreads soft above, and undulating dips

* The Skin as here described includes: 1. The *Cuticle* with its innumerable microscopic tiles specially designed for defence. 2. The *Rete Mucosum*, the seat of color. 3. The *Corium* or True Skin, consisting of two non-separable layers—the upper, papillary and sensitive ; the lower, firm and fibrous. 4. *Perspiratory tubes*, convoluted beneath the true skin, their spiral ducts opening obliquely under the scales of the Cuticle, their office being to purify and cool the body. 5. *Sebaceous Follicles*, or *Oil Glands*, seated in the substance of the skin, serving to soften and lubricate the surface, furnishing likewise, perhaps, 6, that *Distinctive Odor* peculiar to each individual whereby he sows himself on all the winds, and perfumes with every footstep the ground over which he passes. 7. The *Hair*, implanted by a bulbous root in the fibrous layer of the Corium, which being contractile shrinks under the influence of great fear or horror, and as the poet says :

"Makes each particular hair to stand on end
Like quills upon the fretful porcupine"—

quills in the porcupine, feathers in the bird, wool and hair in the quadruped, all belonging to the same category. Hair in man, not being needed for warmth or covering as in the lower lives, is gathered to the head and appropriately crowns it.

Between the sentient papillary tips,
Part of the duplex Corium beneath
Forming a continent elastic sheath,
Felted and firm and suitable to bind,
Muscle and viscus to the place assigned ;
Where, nine full leagues of Tubing buried lie—
All convoluted opening to the sky,
Transmitting formed impurities within,
Through doors and windows of the porous skin,
Th' exuding moisture tempering inward flame,
Cooling the fever of the heated frame—
Fountlets and Rivulets of Oil below,
Preserving softness, ever spring and flow ;
Musk emanations—to the dog defined,
Snuffing his master on the scented wind—
Hair, not for warmth or dress, here sparsely spread,
Reserved to ornament the regal head,
Around the brow of Eva thickly curled
And crowning Adam monarch of the world.

Voluntary Muscles—Their Office and Work.

Lifting this threefold Veil, we find—beneath
A dense, enclosing, universal sheath—*

* The enveloping aponeurosis or fascia binding down the muscles.

REMBRANDT'S "LESSON IN ANATOMY"
Prof. Tulp and his Pupils (All Portraits.)

The subject Muscles—* girded to fulfil
The lightning mandates of the sovereign Will—
Th' abounding means of motion, wherein lurk
Man's infinite capacity for work;
By which, as taste or restless nature bids,
He rears the Parthenon or Pyramids;
In high achievements of the plastic art,
Fulfils th' ambitious purpose of his heart;
Creates a grace outrivaling his own,
Charming all eyes—the poetry of stone;
Symbols his faith, as in Cathedrals—vast
Religious petrifactions of the Past:
Covers the land with cities; makes all seas
White with the sails of countless argosies;
Pushes the ocean back with all her waves,
And from her haughty sway a kingdom saves;
Tunnels high mountains, Erebus unbars,
And through it rolls the thunder of his cars;
With stalwart arm, defends down-trodden right,

* Some authors reckon the number of Muscles in the Human Body as high as 527. They have been divided into *Voluntary* (forming the red flesh, or the main bulk of the body); *Involuntary*, such as the heart, fleshy fibres of the stomach, etc.; and *Mixed*, such as the muscles of respiration, etc. Each Muscle is made up of an indefinite number of fibres, which may be considered as so many muscles in miniature, along which stream the currents of the Will. Yet with all this complex apparatus everything is in harmony.

And, like a whirlwind, sweeps the field of fight ;
And when, at last, the war is made to cease,
On firm foundations stablishes a peace ;
Then barren wastes with nodding harvests sows,
And makes the desert blossom as the rose.

Muscular Dynamics—Directing Power Where?

Bundles of fleshy fibres without end,
Along the bony Skeleton extend
In thousand-fold directions from fixed points
To act their several parts upon the Joints ;
Adjustments nice of means to ends we trace,
With each dynamic filament in place ;
But where's the Hand that grasps the million reins
Directs and guides them, quickens or restrains?
See the musician, at his fingers' call,
All sweet sounds scatter, fast as rain-drops fall ;
With flying touch, he weaves the web of song,
Rhythmic as rapid, intricate as long.
Whence this precision, delicacy and ease?
And where's the Master that defines the keys?
The many-jointed Spine, with link and lock
To make it flexile while secure from shock,
Is pierced throughout, in order to contain

The downward prolongation of the brain ;
From which, by double roots, the NERVES* arise—
One Feeling gives, one Motive Power supplies ;
In opposite directions, side by side,
With mighty swiftness there two currents glide—
Winged, head and heel, the Mercuries of Sense †
Mount to the regions of Intelligence ;
Instant as light, the nuncios of the throne
Command the Muscles that command the Bone.
Each morning after slumber, brave and fresh,
The Moving Army of the Crimson Flesh,
From fields of former conquests, marching comes
To the grand beating of unnumbered drums—‡
Each martial Fibre pushing to the van
To make "I will" the equal of "I can";

* For the benefit of the general reader, presumably not familiar with anatomical details, we may state that there are 43 pairs of nerves in all, *i. e.* 12 Cranial or Encephalic and 31 Spinal. The first have only one root in the brain, whilst the latter arise by two roots from the anterior and posterior halves of the spinal marrow, but unite immediately afterwards to form one nerve. Division of the anterior root causes loss of motion—of the posterior the loss of sensation. The first transmit volitions *from* the brain, the latter sensitive impressions *to* the brain.

† Helmholtz has instituted experiments to determine the rapidity of transmission of the nervous actions. For sensation the rate of movement assigned is one hundred and eighty to three hundred feet per second. Muscular contraction, or shortening of the muscular fibre takes place, at times, with extreme velocity ; a single thrill, in the letter R., can be pronounced in the 1-30,000th part of a minute. There are insects whose wings strike the air thousands of times in a minute. The *force* of contraction (*Myodynamis*) is most remarkable in some of these. In birds, the absolute power in proportion to the weight of the body is as 10,000 to 1.

‡ The heart and arteries.

Testing the possibilities of power
In deeds of daring suited to the hour;
Doing its utmost to build up the health
And glory of the inner Commonwealth.
Levers and fulcra everywhere we find,
But where's the great Archimedean Mind,
That on some POU STO,* outside and above,
Plants its firm foot this living world to move?

Cranium—Soul's Firmament—Brain.

Find it we shall, if anywhere we can,
Doubtless, in that high Capitol of man,
Whose Spheric Walls, concentric to the cope,
Were built to match the nature of his Hope.
What seems the low vault of a narrow tomb,
Is the Soul's sky, where it has ample room;
As apt through this, its crystalline, to pass,
As though it were diaphanous as glass.
When Sense is dark, it is not dark, but light,
Itself a sun, that banishes the night,
Shedding a morning, beauteous to see,
On the horizon of Eternity.

* Archimedes used to say, "Give a place where I may stand (δος που στω), and I can move the world."

Strange, a frail link and manacle of BRAIN
So long below suffices to detain
A principle, so radiant and high,
So restless, strong, and fitted for the sky.

Mind's Organ—City of the Dead.

Here mounted, standing on the topmost towers,
Up to the roof of this high dome of ours,
With the Mind's Organ in our hands, what new
Secrets of structure strike th' astonished view?
A weird and wonderful, and fragile mass
Of white and gray *—deserted now, alas!
All knowledge quite razed out; no trace
Of things which were; now mourns each happy place,

* The Nervous System everywhere consists of two kinds of tissue—White and Gray. The White forms the *nerves*, the *exterior* of the spinal cord, and the *central* parts of the brain and cerebellum (where it is soft, like curdled cream, but is firmer in the nerves), composed everywhere of parallel fibres or threads of extreme fineness, which form the CHANNELS of nervous power and influence to and from the GANGLIONIC CENTRES—Sources, both great and small, of this influence. These constitute the Gray substance found in the *central* parts of the spinal cord, at the *base* of the brain in isolated masses, and the *exterior* of the cerebrum and cerebellum, where to economize space it lies in folds, dipping down into the interior, and forming the convolutions. It is found also in the ganglia of the Great Sympathetic. Condensely stated, the gray ganglia *originate* nervous power, the white nervous filaments only *transmit* it. The Hemispherical Ganglia (the plaited or convoluted cortex of the cerebrum forming about nine-tenths of the whole mass of the brain), although entirely destitute of both sensibility and excitability, are believed to be on good grounds the special seat, so far as these can be said to have any, of the intellectual faculties—memory, reason, judgment and the like. Impressions, conveyed to the Spinal Cord, *i. e.* its ganglionic centre, are there *organ-*

Where frolicked once the Children of the Mind,
Of all the number, not one left behind ;
No vestige of the battle and the strife ;
None, of the conquests that ennobled life.
Hid is the maze where Doubt was wont to grope ;
Hid the starved fibre of a perished Hope ;
Hid the tough sinews of a wrestling Faith,
The Christian Athlete matched with Sin and Death ;
Hid all the teeth-prints of the wolves of Grief,
A savage pack, of which Remorse is chief.
How strange, of all the wounds our comforts mar,
That of the fellest we should find no scar!
None can point out where UNDERSTANDING dwelt ;
None, the high places where RELIGION knelt—
The spot where REVERENCE, with feet unshod,
Came to consult the Oracle of God.
The crypts and catacombs, where MEMORY cast
The bones of all the dead of all the Past ;

ically, not intellectually perceived, and the movements which follow are such as are dictated by supreme *organic* wisdom, forming indeed an admirable *mimicry* of conscious sensation and voluntary action, but mimicry only, for both are really absent. This belongs to what is called "reflex action," and explains automatic function and phenomena, of which life is full. It is not, it is believed, until impressions have reached the ganglion of the Tuber Annulare that they are converted into *conscious* sensations and excite *voluntary* movements. And only when they have mounted to the Hemispheres, the ganglia of thought and feeling, that they become the property of the intellect and are made the grounds of rational conduct.

Shelves, where were stowed all libraries of man,
All gray traditions, since the world began;
All literatures, religions, kinds and parts
Of knowledge, laws, philosophies and arts;
All actions, all articulated breath—
The Book of Life, and, ah! the Book of Death,—
Wherein, whatever fatal leaf it turned,
Its former self the guilty soul discerned,
Mirrored entire—seen outside and within
In every form and attitude of sin;
Th' inevitable reflection, imaged there,
True to the life, like pictures of Daguerre;
The very scene, in which each deed was done,
Painted in all the colors of the sun;
So faithful, fresh, time, circumstance and act,
The past reality seemed present fact—
There field, and weapon, and the riven brain
Of Abel smitten by the hand of Cain,
And blood, with red moist lips, in Pity's ears
Crying for vengeance through eternal years,
Th' unwashed crimson of the guilty sod
As in the eye and memory of God.
IMAGINATION's skyey seat, where came
For soaring flight the demigods of fame,

Home of the Muses, fair and forkèd Mount
Of high Parnassus, and Castalian Fount,
Whence issued streams that watered all the earth,
Then most, when blind Mœonides had birth ;
And Zion's holier Hill, and Siloe's Brook,
Warbling forever, in blind Milton's book ;
The topmost peak where Shakespeare took his stand,
And waved his wand of power o'er sea and land.
Strange, that so sweet and heavenly a hill,
Should breed fierce dragons, ravenous beasts of ill—
"Gorgons and hydras, and chimeras dire,'
Monsters of hideous shapes, with tongues of fire—
Have rifted rocks whose entrance leads to hell,
And the damned wizard of the mighty spell,
Making its precincts all enchanted ground,
Turning to horror every sight and sound,
With grisly terrors, straight from Acheron,
Peopling each nook, and darkening all the sun.
None can the judgment seat of CONSCIENCE show,
That highest Court and Parliament below,
Where, sole and sovereign, seated on her throne,
She recognized th' Infallible alone.
To her, the keys of heaven and earth were given,
And what she bound on earth was bound in heaven.

By the clear light, which her decisions shed,
Instructed feet in pleasant ways were led,
Martyrs were pointed to the neighboring sky,
And Patriots taught how sweet it is to die.

Where these had their high dwelling, we, in vain,
Seek in this packed and folded pulp of brain.
Judged, by the ignorant regards of sense,
How mean! by heights of function, how immense!
To reason and the vision of shut eyes
Its infinite expandings fill the skies.
What regions of sublimity once there!
What mountains soaring in the upper air!
Not thunder scarred Acroceraunian* peak,
Alpine or Himalayan loftier than the Greek,
So high so hidden—from whose secret tops,
Keener than needles, trickled the first drops
Of rising rivers, flowing silently
Into the cerebral deep drainless sea,
From which, as from a mighty fountain-head,
Life's crystal waters everywhere were spread,

* A range of very high mountains in Greece (from ἀκρος, extreme, and κεραυνὸς, thunderbolt), so called because their peaks are often struck by lightning.

Coursing in liquid lapse through Channels White,*
Swift as the lightning, stainless as the light,
Conveying to each atom of the whole
Volitions, animations, power and soul.
Once beautiful for situation, gem
And joy of the whole earth, Jerusalem,
How sits she solitary! she that was great
Among the nations, now left desolate!
Th' adversary hath spread out his hand
On all her pleasant things and spoiled the land;
Her gates are sunk into the ground; the rent
And ruined rampart and the wall lament;
Her palaces are swallowed up; the Lord
His altar hath cast off; He hath abhorred
His sanctuary even; hath o'erthrown
And pitied not, nor cared to spare His own.

* The Nerves are composed of bundles of minute fibres or filaments, averaging 1-2,000 of an inch in diameter. Each filament consists of a colorless, transparent, tubular membrane, containing a thick, softish, semi-fluid nervous matter which is white and glistening by reflected light. Running through the central part is a longitudinal grayish band, called "the axis of the cylinder." Branches of a nerve are merely separations and new directions of some of the filaments of the bundle, these being always continuous from their origin to their point of distribution, which prevents any confusion arising from a running together of impressions. The nervous tree, like that of the blood vessels, is so vast, that in its totality, exhibited separately, it would give almost an outline of the human form. The circulation of a nervous fluid, though not demonstrable, has been hypothetically deduced from the tubular structure of the nerves and other considerations. Assuming the fact, the whole body may be said to swim in this vital sea, having its analogy in that higher or divine animation, described as being "filled with the Spirit."

The Eye, and its Correlative.

The ways of Zion mourn ; funereal gloom
Fills every habitation like a tomb ;
Closed is each port, and window of the mind ;
And there is none to look—the Eye is blind.
How different once, when in that little Sphere
The glorious universe was pictured clear !
O what an Organ that ! germane to Light,
Whose own relations too are such to sight,
T'were hard to say, the two so nicely fit,
Made was the eye for light, or light for it.
Ne'er were two lovers, separate by space,
More eager, fond, impatient to embrace,
Than that sweet splendor—streaming from afar,
Traveling for ages from some distant star,
Straight as an arrow speeding from the bow—
And that dear Eyeball waiting here below.

Light has no Manifesting Power without the Eye.

Prime work of God ! upon the bended knee
The whole creation homage pays to thee ;
From night and chaos countless suns emerge
That all their beamings may in thee converge,

Since wholly vain and useless were, they know,
Without the Eye to see, their light to show ;
They roll in darkness, quenched their every ray,
Till thy lids opening change the night to day.
Placed, for commanding and enjoying these,
In the dread centre of immensities,
The depths thou searchest and the heights supreme,
Ranging at will from this to that extreme.
Where space is dark to thy unaided sight,
Thither thou turn'st thy telescope of might,
And in the heart of the abysmal gloom
Behold'st celestial gardens all abloom—
Brave starry blossomings and clusters fine
Loading the branches of the heavenly vine ;
See'st suns, like dust, lie scattered 'long the road
That leads to that far Paradise of God.
From this to yonder, who the leagues can tell ?
One might compute the ocean's drops as well.
Turn now ! the nether infinite explore !
Extend thy vision as thou did'st before !*
Pierce downwards, pierce to the concealed minute,
The ultimates of things, the germ, the root,

* For example, with a Microscope that magnifies a million times.

The atom world,—so near and yet so far
Not more remote is the remotest star—
To forms of life to which, O can it be?
A drop of water is a shoreless sea!
So vast thy sweep, it surely were not strange
If eye angelic had no wider range.
Even so! On earth or in the realms of air
Nothing is fair but as thou mak'st it fair—
In face or flower or iris braided rain,
Beauty exists not or exists in vain;
Without thy power to paint them or perceive
There were no gorgeous shows of morn and eve.

Light lost in the Eye reappears in the Consciousness.

How wonderful, that organs made of clay
Should drink so long th' abundance of the day!
Receive the constant unreturning tides
Of sun and moon and all the stars besides!
Not lost is all this mighty wealth of beams—
Rivers of light, innumerable streams,
Flow darkling for a space, then spring again
To join the Arethusas * of the brain,

* The river Alpheus in Elis is fabled to flow under the earth to Sicily and to unite with the fountain Arethusa; hence Arethusa, a nymph, whose lover was Alpheus.

In bliss of married consciousness to be
Fountains of brightness through eternity.

Tears—Sleep, its Resuscitating Power—Organic Life.

Since man was born to trouble here below,
Tears were provided for predestined woe ;
And tears have fallen in perpetual shower
From man's apostasy until this hour,
But there's the promise of a future day
When God's dear hand shall wipe all tears away.

On eyes that watch as well as eyes that weep
Descends the solemn mystery of Sleep.
Toiling and climbing to the very close,
The weary Body, longing for repose,
On the gained level of the day's ascent,
Halts for the night and pitches there its tent ;
Then, sinking down, is 'gulfed in an abyss
As deep and dark as the abodes of Dis.*
Rather, returns into the peaceful gloom
And blank unconsciousness of Nature's womb,
Where plastic forces work, to be next morn
To a new life and mightier vigor born—

* Domos Ditis.

Prepared to run again Life's upward way
Scaling the misty summits of To-Day;
Lo! height o'er height, through all the years, they rise,
Supplying steps by which to mount the skies,
Ladder, like Jacob's, heavenly, complete,
Whose radiant rounds were for angelic feet.
From night's dark caves spring evermore, in truth,
Fountains of freshness and perpetual youth;
This seeming death, with consciousness at strife,
Is health and happiness and length of life.
There is within, that which preserves and keeps—
Organic Providence that never sleeps·—
When the slack hand of Reason drops the rein,
This drives the chariots of the heart and brain.
Were life's full goblet trusted to the Will,
Its nerveless hand would soon its contents spill;
The Maker so was careful to provide
Another principle and power beside,
Archeus,* Instinct—any name may serve—

* The Archæus (from Gr. ἀρχεύω, to rule; ἀρχη, beginning), according to Van Helmont, is an immaterial principle, existing from the beginning and presiding over the development of the body and over all organic phenomena. Besides this chief one, which he located in the upper orifice of the stomach, he admitted several subordinates, one for each organ, each of them being liable to anger, caprice, terror, and every human feeling.

Organic Life, Great Sympathetic Nerve,*
With Cerebellum,† competent to save,
And rescue from the clutches of the grave,—
When Sleep would else have caused immediate death,
Stopped the heart's action, and cut short the breath,
Drying each source, that fed and kept alive
Th' industrious bees in the organic hive.‡

* The Great Sympathetic lies in front and along the sides of the spine, and supplies the organs over which the will and consciousness have no immediate control, such as the intestines, liver, heart, etc. Its numerous ganglia (centres and originators of nervous influence) are the knots of a nervous reticulation which connects not only the organs of Organic Life one with the other, but these also with the brain and spinal cord. It is due to this--separately or conjointly with the spinal cord in its reflex or excito-motor capacity, derived from its own ganglionic axis or pith, giving it also independent and automatic powers, powers not sensibly dependent upon the consciousness or will for their exercise—that all the vital functions do not come to a stand-still in our first slumber.

† The opinion, which attributes to Cerebellum the power of associating or coordinating the different voluntary movements, is the one now most generally received. Destroyed, the gubernatorial faculty is lost and the animal staggers and falls like a drunken man. In addition to this, it has been supposed that whatever the cerebrum does rationally and by fits, the cerebellum does unconsciously and permanently—so that in sleep, the motions of thought and will not being organically but only consciously suspended, need to be maintained and kept up to their proper level, and that this is the office of the cerebellum, which like the chain and springs of a watch, not only regulate its movements, but prevent it from running suddenly down.

‡ While an exaggerated importance may have been given to the doctrine of Cell Formation, the truth of it seems to be well established. The statement of Virchow that "Every animal presents itself as a sum of vital unities, every one of which manifests all the characteristics of life," although hypothetical, at least in part, is a convenient formula for explaining many vital phenomena observed both in health and disease. Receiving it, it certainly justifies the figure here used—the bee working with a blind instinct, being compared to that organic intelligence, which resident in each cell presides over the functions of nutrition, secretion and elimination.

Spiritual Analogies.

As light to Eye, so to the Soul, in sooth,
The light of God, the higher light of Truth.
How, when man fell, his dark and hungry eyes
Looked for the sunrise in the eastern skies!
Filled with all doubt, and wandering forlorn,
Watching for signs of the delaying morn!
Ah! should it never break, the stumbling feet
Go stumbling onward to the Judgment Seat;
And toward the guilty, should there be no ruth
In the just bosom of the God of Truth;
Those images of horror and affright,
Projected on the canvas of the night,
Should aye be present, wheresoe'er he turn,
And God's fierce anger never cease to burn!
Ah! when the parting heavens some gleam let through,
Some gleam of promise shining through the blue,
Ah, more! when that the Dayspring from on high
Told that the Sun of Righteousness was nigh;—
Waving glad wings of many colored flame,
Fore-running angels certified He came;
Then most of all, when following full soon,
Upon his midnight burst eternal noon;

How to the heavenly host his pulses beat,
Timed to the music of their marching feet!

Congenital Blindness—Awards of the Last Day.

Alas, for those, who, haply blind from birth,
Have never seen the loveliness of earth;
To whose rapt gaze, the spectacle ne'er given
Of all the dread magnificence of heaven;
One mighty blank, one universal black,
The moving wonders of the Zodiac;
The constellations from their fixed abode,
Shed no sweet influence on their darkling road:
Their rolling eyeballs turn, and find no ray;
An unknown joy, the blessedness of day.

Between the man, who, in his neighbor's grief,
With swiftest pity, flies to his relief;
And him, whose cruel and unnatural part
It is to plague and wring his brother's heart,
How deep the gulf! how different the award
At the great final coming of the Lord!
In the Last Judgment, all the world shall hear
The silent thunder prisoned in a tear—*

* Faraday has shown by the most conclusive experiments that the electricity which decomposes, and that which is evolved by the decomposition of a certain quantity of matter are alike. A single drop of water therefore contains as much electricity as could be accumulated in 800,000 Leyden jars—a quantity equal to that which is developed from a charged thunder-cloud.

The pent up wrath shall strike the tyrant there,
Who would not pity, and who would not spare.

Asylums for the Blind.

Thou, who wert styled th' Apostle of the Blind,
No bays too green, thine honored brows to bind,
Who toiled and sacrificed beyond the sea—
'Tis right to name thee, Valentin Haüy !*
To render happier a cheerless lot ;
Enrich with knowledge those who have it not ;
To pour new light into the darkened mind,
And force an entrance where it none can find ;
By novel methods, and ingenious tools,
Imparting all the learning of the schools ;
For loss of one, obtaining recompense
In the perfection of another sense ;—
Inspiring music, bringing heaven so near
They almost think they see it, as they hear—

* Louis IX., better known as St. Louis, in 1260 founded the *Hospice des Quinze Vingts* at Paris—designed, as its name implies, originally for 15 score or 300 persons—which still exists. This is believed to have been the first public provision ever made for the Blind. It was solely eleemosynary. No instruction was attempted. Although in the 16th century attempts were made to print for the Blind in intaglio and afterwards in relief, nothing material was accomplished, till 1784, when Valentin Haüy, "the apostle of the blind" as the French named him, commenced his arduous, and self-denying labors, and laid the foundations of the modern system. His pupils became eminent as musicians or mathematicians.

Is like that work, in kind if not degree,
Done Bartimeus, when Christ made him see.

Asylums for the Deaf and Dumb.

Not less their praise, nor less their high reward,
Th' unequaled heroes of a task more hard,
Enthusiasts, who labored to bridge o'er
The gulf of silence, never passed before,
To reach the solitaire, who lived apart,*
Cut off from commerce with the human heart;
To whom had been, all goings on below,
A ceremonious and unmeaning show;
Men met in council, on occasions proud,
Nought but a mouthing and grimacing crowd;

* The possibility of teaching the Deaf and Dumb was never conceived by the ancients. Useless to the State, their destruction in infancy was even connived at; and they were classed legally with idiots and the insane. Plunged in a night of the profoundest ignorance, sitting apart in utter loneliness, their state was the saddest possible. Attempts to instruct them belong mostly to modern times. Three systems have been adopted in different countries. 1. That of Wallis, Pereira Heinicke and Braidwood, which falsely assumed that while signs may give vague ideas there can be no precision without words. Consequently the first years under this system were devoted almost wholly to learning articulation and reading on the lip. 2. That of abbé De l'Épée as improved by Sicard and Bebian, which proceeds on the directly opposite theory that there is no idea which may not be expressed by signs without words. Sign language has the important advantage, besides many others that might be named, of being universal. 3. The American system, which is a further modification of De l'Épée's. The number of deaf-mutes who have distinguished themselves in science and art is already quite considerable. My friend, Mr. John R. Burnet, farmer and author, living at Livingston, N. J., is one of the best informed men in the State.

And all the great transactions of the time,
An idle scene or puzzling pantomime.
Children of silence! deaf to every sound
That trembles in the atmosphere around,
Now far more happy—dancing ripples break
Upon the marge of that once stagnant lake,
Aye by fresh breezes overswept, and stirred
With the vibrations of new thoughts conferred.
No more your minds are heathenish and dumb,
Now that the word of truth and grace has come;
Your silent praise, that penitential tear,
Are quite articulate to your Saviour's ear.

Hearing—Powers of Sound—Music of Nature.

Within a bony labyrinthean cave,
Reached by the pulse of the aërial wave,
This sibyl, sweet, and mystic Sense is found,
Muse, that presides o'er all the Powers of Sound.
Viewless and numberless, these everywhere
Wake to the finest tremble of the air;
Now from some mountain height are heard to call;
Now from the bottom of some waterfall;
Now faint and far, now louder and more near,
With varying cadence musical and clear;

Heard in the brooklet murmuring o'er the lea ;
Heard in the roar of the resounding sea ;
Heard in the thunder rolling through the sky ;
Heard in the little insect chirping nigh ;
The winds of winter wailing through the woods ;
The mighty laughter of the vernal floods ;
The rain-drops' showery dance and rhythmic beat,
With twinkling of innumerable feet ;
Pursuing echoes calling 'mong the rocks ;
Lowing of herds, and bleating of the flocks ;
The tender nightingale's melodious grief ;
The sky-lark's warbled rapture of belief—
Arrow of praise, direct from Nature's quiver,
Sent duly up to the Almighty Giver.

Music of Art—Instrumental and Vocal.

If once, ye Powers, with reeds, a rustic Pan,
Ye tuned idyllic minstrelsies for man,
These thin dilutions of the soul of song,
Ye have abandoned, and abandoned long.
Sweet as the spheral music of the skies,
The thunder of your later harmonies.
O fill the void capacious atmosphere
With your full sum, and pour it in the ear ;

Drown it with melody, nor let it wade
Longer in shallows, of the deep afraid.
Join to all instruments of wind and cords
The poetry and excellence of words.
If Country calls, put in the Trumpet's throat
A loud and stirring and a warlike note ;
And let there follow an inspiring blast,
As the long file of heroes hurries past ;
Then raise th' exultant clamor to its height,
When crowned as victors, they return from fight.
Because the service God demands of men
Is not an intermittent thing of now and then,
Temples of permanence we rightly raise,
For the perpetual purposes of praise,
And build great Organs, in whose tubes of sound,
Sleeping or waking, ye are always found.
Awake ! prepare Te Deums ! now awake !
Wave your great wings till all the building shake !
Rend the low roof, and rend the vault of heaven,
Bearing the rapture of a soul forgiven !

Voice—Air of Expiration, Its Transmutations.

Wonderful instrument, but not so choice
As is the Organ of the HUMAN VOICE.

What compact proof of Heavenly Power and Skill,
When simplest means sublimest ends fulfill!
That two-stringed Lyre—quick strung to every note,
Placed at the windy entrance of the throat,
With a divine economy of room,
So placed it might the smallest space consume,
There where the aërial currents come and go,
To feed the vital fires that burn below,
And with a quickening purifying force,
The blood to freshen in its onward course—
Taking the waste, effete and useless breath,
Charged with the very element of death,
Converts it into music, glorious shapes
Of power and beauty, ere that breath escapes.
A transformation marvelous and strange,
Unequaled, in the Alchemy of change;
Harmonious forces working to condense
The blazing jewels of intelligence;
Diamonds more rich than proudest monarchs wear,
Formed from the gaseous carbon of the air;
Th' imperial currency of human wit,
Image and superscription stamped on it,
Coined from the atmosphere—th' exhaustless mine
Of golden treasures magical and fine—

Chief circulating medium of thought,
And common mintage by which truth is bought,
And wisdom in its infinite supply,
Stored in th' invisible market of the sky!

Speech, Accountable Self-recording—Mathematical Problem.

O Heart and Mouth, in strictest wedlock bound,
Whence spring th' immortal births of soul and sound!
Winged for far flight, your moral offspring sweep
The airy fields of the cerulean deep,
Up to the awful place, where Judgment waits
Within Eternity's tremendous gates.
Philosophy itself may serve to teach,
No power so fearful as the Power of Speech.
The idle word, which nothing can recall,
Breaks sacred silence thrilling through the All;
Yea, like a pebble dropped into the sea,
Ripples the ocean of immensity;
An oath profane, the horror of a lie,
The shuddering Ether bears beyond the sky:
Sounding through height and depth, its way it takes
To distant spheres, and endless echoes wakes;
After long ages, still can be inferred,
The sense and nature of each uttered word,

Declared in postured particles, because
The dance of atoms is by rhythmic laws :
For that another cannot be the same,
God calls each atom by a different name ;
Makes these an alphabet, by which to spell
Each sentence spoken, and each syllable ;
Beyond the power of parchment, or of pen,
Expounding all the utterances of men.*

Its Social Uses—The Word made Flesh.

Most genial of the faculties is this,
And most subservient to social bliss ;
Fulfills the longing as no other can,
When man would manifest himself to man ;

* Mr. Charles Babbage—an English Mathematician of the first rank, formerly Lucasian Professor of Mathematics at Cambridge, the Chair of Newton, famous also as the inventor of a Calculating Machine, built at a cost to the English Government of $85,000, followed by another. involving a still heaver outlay—in a work styled "The Ninth Bridgewater Treatise," published in 1838, filled with much original and quaint speculation, expresses his faith in the startling doctrine that no word or action can ever be eliminated from the records of Nature, but that the air is a "vast library," in whose pages are forever written all that man has ever said or woman whispered, inasmuch as the aërial pulses which seemed to have died out completely might yet be demonstrated by human reason to exist. So of the ocean. A being possessed of unbounded powers of mathematical analysis might trace the results of any impulse on the fluid, or read back the history of the sea in its own billows. And so too, the solid frame of the earth may serve as a stereotyped record both of the transactions and the proceedings of its inhabitants; for not only the heavings of the greatest earthquakes, but the little local tremors which the stamp of a human foot may produce, may all be said to have left their memorials in the ground. Heaven and earth are therefore prepared to bear wit ness against the transgressor on the Day of Judgment. Terrible thoughts these, but what if they are true ?

The isolated soul shut up no more
Walks freely forth as through an open door.
Vainly in inarticulate dumb show,
Had Nature strove to teach man here below ;
When finding that intended to reveal,
Served but the more His presence to conceal,
God put aside the Vesture of the Skies,
And walked and talked with men in Human Guise :
Th' apocalyptic Word made Flesh, made thus
Communicated Godhead—GOD WITH US.

Articulation—Nose—Mouth—Smell—Taste.

Behold how man, the polyglot, employs
Th' uncompounded elemental noise !
Makes endless permutations, mixes breath
For nice intonings of each shibboleth !
Up from the Throat, one little step, we reach
The cunning moulds and matrices of speech ;
Formless and void the vocal chaos flows,
Shaped into Language by the Mouth and Nose ;
Mellifluous modulations taking place,
In scented caverns of the hollow face ;
Sweet mobile Lips, Teeth, Palate, flavorous Tongue,
Making intelligible the speaking Lung ;

Aiders of Speech, but then the seats as well
Of the two senses of the Taste and Smell.

Smell—Odors, Their Subtlety and Imponderability.

The Nerves of Smell, the first the brain to leave,
Combed and divided through a bony sieve,*
They, from their tresses of disheveled hair,
Shake out the tangled fragrance of the air.
Conversant with all sweetness—Nature brings
Hither the soul and quintessence of things ;
Airy solutions of the finer powers,
Imponderable properties of flowers ;
Th' aroma of all seasons and all times,
Kingdoms of nature, continents and climes—
Too subtle and too spiritual, I ween,
These for analysis however keen.
Daintiest of senses, daintily it feeds
On thymy pastures of the skyey meads,
Drinks from etherial fountains, whence are quaffed
Delicious lungfulls at one mighty draught,
Cheering the breast, and sweetening all the blood,
Like some celestial minister of good.

* The ethmoid bone (from ηθμος, "a sieve," and ειδος, "form").

Breath of Life, Natural and Spiritual.

God breathed, O breath with heavenly sweetness rife !
Into man's nostrils first the breath of life.
The blissful aura vivified the whole,
And straightway man became a living soul.
Then odorous Eden yet more odorous grew,
As o'er its bowers, th' informing Spirit blew
Another inner and diviner air,
Moving within the proper atmosphere,
That shook the leaves and made the tree-tops nod,
A mystic wind immediately from God,—
Rushing and mighty like the Holy Ghost
Poured out upon the day of Pentecost.
Still the same Spirit where it lists it blows,
We know not whence it comes nor where it goes,
But souls it quickened on Creation's morn,
Now dead in sin to a new life are born :
One inspiration of immortal breath
Creates a life beneath the ribs of death.

Theopneusty.

O via sacra, O thrice blessed door,
Once hallowed with Thy presence, hallow, Lord ! once more.

Inbreathe Thyself, my Maker ! fill each cell
Of my deep breast, and deign with me to dwell.
Come, my Desire ! Thou theme of heavenly tongues,
Fulfill the want and hunger of the lungs.
Be Thou my breath, my laughter, my delight,
My song by day, my murmured dream by night.
When hope dilates, and love my bosom warms,
Be these the product of Thy powerful charms.
If grief convulses, be it grief for sin,
Prompt every sigh and make me pure within ;
Perfumed by Thee " make every breath a spice
And each religious act a sacrifice."

Taste—Elimination and Waste—Nothing Lost.

We eat to live : the Gustatory Sense
(The same as Smell, but with a difference)
At the pleased portal of the hungry throat,
From endless sources, neighboring and remote,
Assembles relishes, and daily feeds
On these to satisfy the body's needs.
Each moment, lo ! we die and are reborn ; *
The old becomes cadaverous and outworn ;

* " Occasio enim præceps est propter artis materiam, dico autem corpus, quod continue fluit et momento temporis transmutatur."—*Galen.*

Beyond the boundary of our every breath,
Wide yawns the open sepulchre of death;
Parts of our living selves give up the ghost;
Corrupt, corrupting, use and function lost,
Benignant Nature with victorious force
Effects deliverance from the loathed corse
And body of this death; in ceaseless flow,
Fun'ral processions of dead atoms go,
Thronging life's ways and outward opening gates,
All unattended, where no mourner waits.
Because the quick have duties, let the dead
Bury their dead, the Lord of life hath said.
No fear that needful ministry or rite
Shall then be wanting when they pass from sight;
Sown on the winds or swallowed of the waves
They shall not fail of hospitable graves.
Dear to terrestial and celestial powers,
Through every moment of the flying hours,
Earth, careful mother, to her bosom draws
Each reverent particle subject to her laws;
Dust welcomes dust, and all the happy ground
Rejoices that the lost again is found.
Again it forms a portion of the mould
To tread the circle it fulfilled of old.

Again it ministers to the thirsty root,
Mounts to the blossom and matures the fruit;
Eaten again, again it makes a part,
Or of the thinking brain or feeling heart.

Human Want and Divine Supply.

Because we ne'er continue in one stay—
Our flowing lives still wash their banks away;
This colliquation of unstable flesh,
Invades the old and scarcely spares the fresh;
The new formed solid, even, oozes through,
"Thaws and resolves itself into a dew;"
And all is flux, and out ten thousand doors
Our manly strength perpetually pours—
We Hunger and We Thirst, and all abroad
We see spread out the mighty Feast of God.
Abounding plenty equal to the waste
With luscious adaptations to the taste;
Viands heaped up in such seductive guise,
Forestalling pleasure looks with sparkling eyes
The golden produce of the garnered fields,
Whate'er the valley or the mountain yields,
The juicy tops of Nature, not that found
In the dark mineral lumpish underground.

By intermediate vegetative toil,
And much elaboration of the soil,
Lifted in air and glowing in the sun,
We pluck the fruit then when the work is done.
In curious quest of every dainty known,
We draw from every month and every zone.
To pile our boards, the canvas is unfurled
Of more than half the navies of the world.
Art intervenes, and as the case requires,
Concocts the crude with culinary fires;
Goes forth in nature to extend her range,
And serve man's love of novelty and change,
By findings of manipulative skill,
Testings and tastings, mixings at her will
Of all the kingdoms, flavorings of the same,
And seasonings of vegetable flame.
Imperious Wants! obedient to whose call,
Armies capitulate, dynasties fall:
Howe'er the rulers of the earth combine,
They may not blink the fact that man must dine.
It might seem little and beneath God's care—
A punctual ordering of man's common fare;
Unwarranted, extravagant, absurd,
To think our Pater Nosters could be heard—

Did we not know that round our every meal
Suns wait and serve and mighty planets wheel.

Lord's Prayer—Hodiernal Bread—Hygienic Wisdom.

Father in heaven, hallowed be Thy name—
'Tis on Thy fatherhood we build our claim—
Stoop to our needs, we cannot else be fed,
Give us this day, as erst, our daily bread.
Preserve us from perversion and abuse,
Turning Thy bounties from their proper use ;
From gluttony and criminal excess,
Making enough our rule, nor more nor less.
Instruct us how to choose, lest that we sin
Against the body's health, the powers within,
Awful economies and sacred laws,
Of half our miseries the dreadful cause.
May we live innocent as at the first,
Using safe beverages to quench our thirst,
Our common drink be water from the well,
Not brewed enchantments of the fires of hell,
Not tasting unblest cups, by Thee unblest,
But where Satanic benedictions rest,
Cursing and killing, maddening the brain—
Brief joy succeeded by eternal pain.

Ingestion—Digestion—Assimilation.

Be in our Mouths to sanctify our Food ;
Begin the process changing it to Blood.
We dare not call that common and unclean
Which Thou hast cleansed—nor count that longer mean
So honored by assimilations grand,
And exaltations of Thine own right hand,
As through the channels of the body rolled,
Th' ingested Morsel comes to be ensouled.
Wherefore be present, every step attend
Of its miraculous progress to the end.
During the perilous passage of the strait,
O keep fast shut the Laryngeal Gate :
Adown the Throat while that it gently glides,
And in the Stomach's secret chamber hides,
Be there to entertain th' expected guest,
And to the welcome give a keener zest.
Make the couch ready : and mid veiling gloom,
And holy privacy as in a womb,
Induct into the mysteries of the place .
Rain down celestial influence and grace
Upon the nascent neophyte ; prepare
The lavers of regeneration ; where

By wondrous saturations* for a time,
And fresh baptisms of the new-born Chyme
A part all purified, from soil purged clear,
Made meet and worthy of a higher sphere,
Enters the veins and mingles with the blood ;
The rest a stained probationary flood,
Passing the Gate Pyloric waits awhile,
Its transformation into purer Chyle.
Prosper and bless and let the work proceed,
Each faithful function equal to the need ;
Teach the strict Lacteals, duly this to guide
Into the narrow way from out the wide,
Where freed from feculence all white and clean,
And trained, through mazes of the Glands between,
For saintly fellowship and spousals sweet
With the dear Lymph, as they together meet
Within the Duct Thoracic, mount to gain
The level of the pierced Subclavian Vein—
Tempering the mass, to form a fluid part
Of that humanity which fills the Heart.

* The Gastric Juice, like the saliva, is not secreted in considerable quantity (Dr. Beaumont says not at all) except under the stimulus of recently ingested food. It is estimated that the average total quantity secreted in a man of medium size in 24 hours is 14 pounds, equal to nearly two gallons. This quantity would be altogether incredible, were it not, that as soon as it has dissolved its quota of food, it is immediately re-absorbed and agains enters into the circulation, together with the alimentary substances which it holds in solution.—*Dalton.*

PAINTED BY ROBERT HANNAH. ENG. BY HENRY LEMON.

HARVEY Demonstrating to Charles I. his Theory of the Circulation of the Blood.

Heart—Circulation—Nutrition—Blood Exhilarations.

Make room, my HEART!* that pour'st thyself abroad,
Deep, central, awful mystery of God!
Lord of my bosom! wonder of the breast!
"Welcome the coming, speed the parting guest:"
The young white blood, commingled with the old—
Purple, impure, effete in part, and cold—
Give needful furtherance through the Lungs, to where
It meets the fiery spirits of the air—
In friendly barter with the growing plants
Exchanging what they need for what it wants;
For dingy carbon, refuse of the frame,
Receiving back the principle of flame;
While mystic cerebrations downward pour
The human flood to humanize yet more,
Making it moral, with all passions rife,
Instinct with mortal and immortal life;

*In the Fish, the Heart is a single organ, having one Auricle and one Ventricle. In Reptiles, it has two Auricles placed side by side, and one Ventricle. In Quadrupeds and Man it is double, with two Auricles and two Ventricles; and there are two distinct Circulations—the General or Systemic, and Pulmonary. The Blood on the Right Side of the Heart, whether found in the Veins or Arteries, is dark or venous; on the Left, it is ruddy and bright or arterial. The first belongs to the nocturnal side or hemisphere; the latter to the diurnal—the sun having its rising in the capillaries of the lungs, and its setting in those of the general system—where the blood loses for the time its auroral bloom and splendor, and becomes dark, half devitalized and charged with deadly poison, until having completed its circuit, its pristine glitter and beauty are once more restored, as it

Transfigured thus, thus raised and glorified,
Complete the circle on the other side,
Where Auricle and Ventricle with power
Repeat their grasp five thousand times an hour;
Closing unresting hands that never tire
On the one passionate object of desire;
And through each moment of the night and day
A traveling joy to every part convey;
Filling each cell of all the Organs up,
As wine is poured into a jeweled cup,
With the Falernian of the grapes of Heaven,
The living Blood miraculously given—
Endued with plenteous power by which it can
Rebuild the complex of the perfect man;
To every organ like to like impart,
Distribute brain to brain and heart to heart;

reappears on the horizon of the lungs. The rapidity with which the Blood moves is very great. Even in Arteries of the minutest size it is so rapid that the globules cannot be distinguished in it on microscopic examination. It is slower in the Veins than in the Arteries, in the proportion of two to three, and still slower in the Capillaries. Volkman estimates the velocity in the arteries at 12 inches per second; in veins at 8 inches; in capillaries, 1-30th of an inch. Experiments have been made to ascertain the time it takes the blood to pass the entire round of the circulation. Traces of a solution of Ferrocyanide of Potassium introduced into the *right* jugular vein of a horse appeared at the *left* in twenty to twenty-five seconds, but this is not decisive of the rate of the circulation, only of the diffusion. Results swarm with every heart-beat. Life's innumerable wheels, revolving all at once in every organ, make that beat representative of a life-time—a century of existence being no more than a calculable number of repetitions of that vital second.

Conquer the years, the wastes of time repair;
Add to the body, make the fair more fair:
Nor potent less to raise to loftiest heights
Of sensuous pleasures and divine delights—
Untied to fleshy ministrations—fraught
With stimulant to Feeling and to Thought,
Our Ganymede, enlivening with full bowl
"The feast of reason and the flow of soul."

Heart—Seat of the Affections—Visceral Modifications.

Undoubted Sovereign, worthiest to reign,
Sharer of empire with the regal Brain!
(Like omnipresent in the realms of sense,
Found at the centre and circumference,
As if by multiplication, every part
Possessed a sensory and beating heart)
By virtue of thy birthright from above
Thine all the high prerogatives of Love.
One with thyself, Love's ample power display,
Assert its right to universal sway!
As thou, so Love is many and yet one,
Its royal robes of soul and body spun—
Assorted vestments, filling many a room,
The beauteous product of the living loom,

By the deft fingers of the feelings wrought
Plying the shuttle with the helping thought—
The several organs, to their nature true,
Giving each tunic its distinctive hue,
One of the colors of refracted light,
Or the chaste total of religious white—
Defining Loves, all Family Loves that bind,
The Love of Country, Love of Human Kind,
The Love of God all other Loves above,
The Love of Truth and Right, the Love of Love.
Within, what gracious sympathies appeal!
What visceral yearnings do not mothers feel!—
The conscious vitals, full of fond alarms
For the sweet infant folded in her arms,
And melting tendernesses, that impart
Tears to the eyes but laughter to the heart.

Woman—Sex—Unity in Difference.

O loving Woman, man's fulfillment sweet,
Completing him not otherwise complete!
How void and useless the sad remnant left
Were he of her, his nobler part bereft!
Of her who bears the sacred name of Wife,
The joy and crown and glory of his life,

VENUS DE MEDICI

BY

Cleomenes, the Athenian.

B C 200—150.

The Mother of his Children, whereby he
Shall live in far off epochs yet to be.
Conjoined but not confounded, side by side
Lying so closely nothing can divide ;
A dual self, a plural unit, twain,
Except in sex, to be no more again ;
Except in Sex—for sex can nought efface,
Fixed as the granite mountain on its base—
But not for this less one, away to take
This sweet distinction were to mar not make.
Dearer for difference in this respect,
As means of rounding mutual defect.
Woman and Man all social needs include ;
Earth filled with men were still a solitude.
In vain the birds would sing, in vain rejoice,
Without the music of her sweeter voice.
In vain the stars would shine, 'twere dark the while
Without the light of her superior smile.
To blot from earth's vocabularies one
Of all her names were to blot out the sun.

Love of the Sexes—Ends Answered.

O wondrous Hour, supremest hour of fate,
When first the Soul discerns its proper Mate,

By inward voices known as its elect—
Distanced by love, and infinite respect,
Fairer than fairest, shining from afar,
Throned in the heights, a bright particular star
The glory of the firmament, the evening sky
Glad with the lustre of her beaming eye.
Young Love, First Love, Love, haply, at First Sight,
Smites likes the lightning, dazzles like the light;
Chance meeting eyes shoot forth contagious flame,
Sending the hot blood wildly through the frame.
By strange enchantment violently strook,
The total being rushes with a look;
A beauty never seen before, except some gleams
Purpling the atmosphere of blissful dreams,
Wakens rare raptures and sensations new,
Both soul and body thrilling through and through.
Says sage Experience, sighing o'er the past,
These dear illusions will not always last;
For beauty fades and disappointment clings
To the reality of human things.
It may be so—it may be, lover's sight
Surveying all things by love's purple light,
Sees not the faults possession shall disclose,

Nor the sharp thorn concealed beneath the rose.
But if thus Nature her great ends attain
The pomps of fancy dazzle not in vain.
The pleasing falsehood of perfection flits,
But not the Love, that in contentment sits
Among the Dear Ones of its happy home,
Blest with sweet foretastes of the heaven to come.
Deciduous charms of face unmissed depart,
While bloom the fadeless beauties of the heart;
Inward conformity, and gradual growth
Of moral likeness, tightening bonds of both,
Perfect the marriage, which was but begun
Upon that day they were pronounced one.

True Love—Spurious Love.

True Love is humble, thereby is it known,
Girded for service, seeking not its own;
Exalts its object, timid homage pays,
Vaunts not itself, but speaks in self-dispraise:
"Look not on me," it says, "for I am black,
In thee all fullness is, in me all lack;
But what I have and am are wholly thine,
Vast were the grace would'st thou give thine for mine."

Let Love but enter, it converts the churl,
And makes the miser lavish as an earl;
The strict walls of his prison, giving way,
Fall outward and let in the light of day;
Released from base captivity to pelf,
He upwards soars into a nobler self;
And hands, that once did nought but clutch and hoard
Now emulate the bounty of the Lord;
Hold up a mirror, that reflects the face
Of Him whose heart is love and man-ward grace.

O how unlike to this, so chaste, refined,
Magnanimous, benevolent and kind,
Is that base thing, defiling and defiled,
Born of unbridled lusts and passions wild,
Which soon of all the virtues rings the knell
And sends its subjects headlong down to hell!
The hidden canker of a vicious heart
Spreads mortal sickness to the farthest part;
Th' infected body rots from day to day
Till death contemptuous calls the soul away,
To its own place its sentence to fulfill,
"Let him that filthy is be filthy still."

DESIGNED BY E. HAMMAN. ENG. BY C. MANIGAUD.

AMBROISE PARÉ
(1509—1590)

*Charity—Physician—Opiferque per Orbem Dicor.**

O ye, devoted to the Healing Art,
By solemn consecration, set apart
To be the ministers of God above
In the sublime Activities of Love;
Whose special function 'tis to give relief
In the dark hours of suffering and of grief;
Between the living and the dead to stand
Where fall the shafts of death on either hand;
Without one thought of flight, to still maintain
Perpetual battle with the Powers of Pain;
With a fine arrow from a well bent bow
Transfixing fatally the murd'rous foe;
And with an arm made powerful to save,
Snatching the destined victims of the grave;—
The lofty nature of your office such,
You cannot magnify the same too much,
Which Tully† even, eloquently lauds,
As that which lifts man nearest to the gods.

* This motto of the Medical Society of New Jersey is taken from the fable of Phœbus and Daphne in Ovid's Metamorphoses, Lib. I., v. 521–522. Phœbus is represented as saying:

"Inventum medicina meum est; *opiferque per orbem Dicor*, et herbarum subjecta potentia nobis."

Physic is my discovery; and I
Help-bearing [One] am called throughout the world,
To us subjected is the power of herbs.

† Nulla re homines ad deos propius accedunt quam salutem hominibus dando.—*Cicero.*

Nosology—Auscultation of Heart and Lungs

How many forms of sickness man befall,
Sorrow and pain the common lot of all!
Science inquires, and, as its kinship finds,
Makes classes, orders, families and kinds,
Grouping and marshalling diseases so
You can them better nominate and know.
But no nosology did e'er include
The total of the mighty multitude.
Wise to interpret each prophetic sign,
To pierce the veil and hidden fates divine,
When parents ask, with grief and terror wild,
"Canst thou not save my darling, save my child?"
You skilled to catch, while listening to the breath,
The distant footsteps of approaching death,
May, in the sighing of the suffering lung
And in its stillness, hear alike a tongue
That syllables oracular reply:
"Impossible, 'tis fixed, your child must die."
Response more dread not Delphic prophetess
E'er shuddered from her murmurous recess.
With rush of countless chariots, palpitates
Life's great metropolis through all her gates;

DESIGNED BY E. HAMMAN. ENG. BY C. MANIGAUD.

EDWARD JENNER.
(1749—1823.)

Their crimson wheels with a perpetual sound,
Coming and going in their endless round,
Are heard tumultuous as they hurrying throng
Th' Appian or Flaminian ways along :
'Tis yours to know next hour all this will fail,
And death and silence everywhere prevail.

Physician's Character and Aims—Science Progressive.

O it is well, that ye have hearts to feel,
And ears not deaf to pity's soft appeal,
Putting no difference 'twixt rich and poor,
Plying with equal zeal the means of cure,
Not deeming it becoming to regard
Color or rank or person or reward.
The man of impure life and sordid aims,
He smuts his office and his calling shames ;
Him you disown and place him under ban
As nothing better than a charlatan.
Believing needless ignorance a crime,
You strive to reach the summit of your time ;
To old age learning up from early youth
Your life one long apprenticeship to truth.
Wisely suspicious sometimes of the new,
Ye give alert acceptance to the true :

Even though it make old science obsolete,
It with a thousand welcomes still you greet.
"Knowledge is power," and here 'tis power to save,
A power like God's to rescue from the grave.
Each Year adds something—many things ye know
Your sires knew not a Hundred Years ago.
Art grown to more, your sons will higher climb,
And make the Coming Centuries sublime;
Till Christ's Millennial Kingdom shall begin,
And put an end to sickness and to sin.
Heights of the Future! breezy with the breath
Of vernal quickening to the fields of Death,
In the far distance of the long before,
We think we see your misty summits soar;
Though scarce distinguished from the mingling skies,
How glad the sight to our believing eyes!

Spiritual Maladies—Christ the Great Physician.

Ah! there are maladies beyond your skill;
You cannot cure depravity of will;
You cannot mend a moral nature flawed,
Convert a mind at enmity with God;
You cannot terminate the inward strife,
Restore the broken harmony of life;

PAINTED BY A. E. SELIGMAN. PHOTO. DR. E. ALBERT.

Prof. Theodor Billroth, M. D.,
and his
Clinical Assistants, Vienna

With all th' armentarium of Art
Restrain the outflow of an evil heart ;
Cleanse by detergent washings of the skin
Th' immedicable leprosy of sin ;
Remove the lunacy that chooses death,
And imprecates destruction with each breath.
When came the Great Physician of the Skies,
To find a remedy that should suffice,
Knowing 'twas not in mineral or wood,
He sought it in a Pharmacy of Blood ;
And since none other but His own was pure,
He transfused that to consummate the cure.
Man curing when past cure—content to give
Himself to die to make His patient live.

Death—Immortality.

Death spreads, no more—a black and wrathful cloud
The smiling infinite of heaven to shroud—
A harmless mist, instead, divinely bright
With dewy splendors of the morning light
That scarcely serves th' eternal world to hide,
Where loved ones gone before in bliss abide.

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"Dr. Abraham Coles:

"Dear Sir—I cannot deny myself the pleasure of thanking you

once more for your most beautiful little book, 'The Dies Iræ, in Thirteen Original Versions,' which I value not only for its intrinsic merit, but as an expression of your very kind feelings towards me. Believe me, gratefully and truly yours."

William C. Prime, in the "Journal of Commerce":

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The Rev. James McCosh, D. D., LL. D., President of the College of New Jersey, in a letter to Dr. Coles:

"PRINCETON, N. J.

"I have read with the liveliest delight your translations of the 'Latin Hymns.' I wonder how you could have drawn out thirteen of the 'Dies Iræ,' all in the spirit and manner of the original, and yet so different. I thought each the best as I read it. * * * * I have read enough of 'The Microcosm' to see that it is thoroughly scientific."

Richard Stockton Field, LL. D., (1803–1870), in 1838 Attorney General of New Jersey; in 1862 United States Senator; in 1863 appointed by President Lincoln United States District Judge for the District of New Jersey; at the time of his death President of the New Jersey Historical Society:

"PRINCETON, N. J.

"DR. ABRAHAM COLES:

"MY DEAR SIR—With the original 'Dies Iræ' and 'Stabat Mater' I have long been familiar. They have always had a peculiar charm, I may say fascination, about them, and I have loved to repeat them. And now I have no hesitation in saying that they never have been, and I doubt if they ever will be, as well translated into English verse as they are in your volume.

"Knowing the difficulty of the task, seeing how others have

failed. I am indeed astonished at your success. With the strictest fidelity, your translations have all the tenderness, pathos and rhythm of the beautiful and touching originals. I speak more particularly of the first of the 'Dies Iræ' and of the 'Stabat Mater.' The two first stanzas of the latter are perfect.

"Your 'Microcosm,' too, is a noble poem. It has many strikingly beautiful passages. It evinces science and culture, and poetical talent of high order. You display great command of language, and great facility of versification. Your prose also is easy and graceful. I am glad of the opportunity afforded me of rendering this feeble tribute to their merits. Very truly yours."

The "Newark Daily Advertiser:"

"Dr. Coles has supplied a want and done a graceful work in "The Microcosm." What the flower or babbling stream is to Wordsworth, that is the stranger, more complex, and more beautiful human frame to our author. In its organs, its powers, its aspirations, and its passions, he finds ample theme for song. . . Everywhere the rhythm is flowing and easy, and no scholarly man can peruse the work without a glance of wonder at the varied erudition, classical, poetical, and learned, that crowds its pages, and overflows in footnotes. And through the whole is a devout religious tone and a purity of purpose worthy of all praise."

Edmund C. Stedman:

"Dr. Coles' researches, made so lovingly and conscientiously in his special field of poetical scholarship, have given him a distinct and most enviable position among American authors. We of the younger sort learn a lesson of reverent humility from the pure enthusiasm with which he approaches and handles his noble themes. The 'tone' of all his works is perfect. He is so thoroughly in sympathy with his subjects that the lay reader instantly shares his

feeling; and there is a kind of 'white light' pervading the whole—prose and verse—which at any time tranquilizes and purifies the mind."

The Rev. Robert Turnbull, D. D.:

"I have finished the reading of 'The Microcosm,' which has afforded me unmingled delight. It is really a remarkable poem, and has passages of great beauty and power. It cannot fail to secure the admiration of all capable of appreciating it. Its ease, its exquisite finish, its vivid yet delicate and powerful imagery, and above all its sublime religious interest, entitle it to a very high place in our literature."

John G. Whittier:

"Dr. Abraham Coles is a born hymn writer. No man living or dead has so rendered the *text* and the *spirit* of the old and wonderful Latin Hymns. * * * His 'All the Days' and his 'Ever With Thee' are immortal songs. It is better to have written them than the stateliest of epics. * * * The idea of 'The Microcosm' is novel and daring, but it is worked out with great skill and delicacy. * * * 'The Evangel' is a work of piety and beauty. The Proem opens with strong, vigorous yet melodious verse. I see no reason why the Divine Story may not be fitly told in poetry."

Rev. S. I. Prime, D. D., in "The New York Observer":

"'The Evangel in Verse,' is the ripest fruit of the scholarship, taste and poctic talent of one of our accomplished students of English verse, whose translations of 'Dies Iræ' and other poems have made the name of Dr. Coles familiar in the literature of our day. In the work before us he has attempted something higher and better than any former essay of his skillful pen. He has rendered

the Gospel story of our Lord and Saviour into verse, with copious notes, giving the largest amount of knowledge from critical authorities to justify and explain the readings and to illuminate the sacred narrative. . . . He excludes everything fictitious, and clings to the orthodox view of the character and mission of the God-man. The illustrations are a complete pictorial anthology. Thus the poet, critic, commentator and artist has made a volume that will take its place among the rare productions of the age, as an illustration of the genius, taste, and fertile scholarship of the author."

George Ripley, in the "New York Tribune":

"The purpose of this volume, 'The Evangel,' would be usually regarded as beyond the scope of poetic composition. It aims to reproduce the scenes of the Gospel History in verse, with a strict adherence to the sacred narrative and no greater degree of imaginative coloring than would serve to present the facts in the most brilliant and impressive light. But the subject is one with which the author cherishes so profound a sympathy, as in some sense to justify the boldness of the attempt. The Oriental cast of his mind allures him to the haunts of sacred song, and produces a vital communion with the spirit of Hebrew poetry. Had he lived in the days of Isaiah or Jeremiah, he might have been one of the bards who sought inspiration 'at Siloa's brook that flowed fast by the oracle of God.' The present work is not the first fruits of his religious Muse, but he is already known to the lovers of mediæval literature by his admirable translations of the 'Dies Iræ.' . . . The volume is brought out in a style of unusual elegance, as it respects the essential requisites of paper, print and binding, while the copious illustrations will attract notice by their selection of the most celebrated works of the best masters."

The Rev. James McCosh, D. D., LL. D., upon the publication of "The Evangel:"

"College of New Jersey,
"PRINCETON, N. J.

"You are giving to the world further proof that we did ourselves honor in conferring upon you some years ago the honorary degree of LL. D. * * * * I spent several hours last Sabbath in reading your poem, and relished it very much."

Daniel Haines (1801–1877), in 1843 elected Governor of New Jersey, and re-elected in 1847; Judge of the Supreme Court; one of the committee on the reunion of the two branches of the Presbyterian Church:

"HAMBURG, N. J.

"MY DEAR SIR—I can scarcely find fitting words in which to express my sincere thanks for your kind remembrance of me in the presentation of the beautiful copy of your recent work, 'The Evangel in Verse.' From the introduction, the proem and a few chapters, I judge it to be a work of rare excellence. The metrical composition is pleasant to the ear and eye, and is remarkable for its literal meaning. To me the greater charm is its clear and forcible expressions of evangelical truth and sound Christian doctrine.

"It is the most succinct and complete refutation of the doctrine of Darwin and Huxley that I have seen.

"The Christian world owes you a debt of gratitude for your labor and research, and heartfelt thanks to God for giving you the ability to produce a book so full of instruction, and affording so much gratification to the cultivated mind."

The Rev. George Dana Boardman, D. D.:

"'The Evangel in Verse' is a feast to the eye and ear and heart.

The careful exegesis, the conscientious loyalty to the statements of the Holy Story, the sympathetic reproduction of a remote and Oriental past, the sacred insight into the meaning of the Peerless Career, the homageful yet manly, unsuperstitious reverence, the rhythm as melodious as stately, the frequent notes, opulent in learning and doctrine and devotion, the illustrations deftly culled from whatever is choice in ancient and modern art, these are some of the many excellencies which give to 'The Evangel in Verse' an immortal beauty and worth, adding it as another coronet for Him on whose brow are many diadems."

The Rev. Charles Hodge, D. D., LL. D. (1797–1878):

"I admire the skill which 'The Evangel' displays in investing with rainbow hues the simple narrations of the Gospels. All, however, who have read Dr. Coles' versions of the 'Dies Iræ' and other Latin Hymns must be prepared to receive any new productions from his pen with high expectations. In these days when even the clerical office seems in many cases insufficient to protect from the present fashionable form of scepticism, it is a great satisfaction to see a man of science and a scholar adhering so faithfully to the simple Gospel."

The Hon. Frederick Theodore Frelinghuysen:

"United States Senate Chamber,

"Washington, D. C.

"My Dear Doctor—Many thanks to you for having written 'The Evangel.' It is admirably conceived and executed. While the poem impresses the truth, it will lure many who would have remained uninformed to the valuable instruction contained in the Notes. The notes on Darwin, The Logos, Herod, and the miracle at Ajalon, are excellent. The poem brings out many scriptural

truths, which are not on the surface. Let me say, it is a great thing to have written the book—to have your labor associated with salvation."

The Rev. Robert Lowell, D.D., in the "Church Monthly":

"Dr Coles is plainly a man of a very religious heart and a deeply reverential mind. . . . Moreover he has so much learning in his favorite subject, and so much critical instinct and experience, that those who can relish honest thinking, and tender and most skillful and true deductions, accept his teaching and suggestion with a ready —sometimes surprised—sympathy and confidence. Add to all this, that he has the sure taste of a poet, and the warm and loving earnestness of a true believer in the redeeming Son of God, and the catholic spirit of one who knows with mind and heart that Christianity at its beginning was Christianity, and we have the man who can write such books as earnest Christian people will welcome and be thankful for. . . . In this new book he proposes 'that "The Evangel" shall be a poetic version, and verse by verse paraphrase, so far as it goes, of the Four Gospels, anciently and properly regarded as one.' He makes an exquisite plea, in his preface, for giving leave to the glad words to rejoice at the Lord's coming in the Flesh, for which all other beings and things show their happiness. . . . . In the notes the reader will find (if he have skill for such things) a treasure-house, in which everything is worthy of its place. Where he has offered new interpretations, or set forth at large interpretations not generally received or familiar, he modestly asks only to have place given him, and gives every one free leave to differ. Everywhere there is the largest and most true-hearted charity. . . . The reader cannot open anywhere without finding in these notes, if he be not wiser or more learned than ourselves, a great deal that he never saw, or never saw so well set forth before."

Stephen Alexander, LL. D., Professor of Mechanics and Astronomy in the College of New Jersey:

"Princeton, N. J.

"Abraham Coles, M. D., LL. D.:

"My Dear Sir—I have delayed the acknowledgement of the receipt of your beautiful 'Evangel' until I could make some return after the same fashion. Please accept my sincere thanks, as well as my congratulations on your great success. I am always interested in your books, and always learn something from them.

"With this I send a copy of my 'Statement and Exposition of Certain Harmonies of the Solar System,' which I hope may reach you safely. Please accept the same, with my respects and regards. I think the Notes at the end and the supplement may especially interest you."

Dr. Oliver Wendell Holmes:

"There is a kind of straightforward simplicity about the poetical paraphrases which reminds one of the homelier but still always interesting verses which John Bunyan sprinkles like drops of heavenly dew along the pages of the Pilgrim's Progress. The illustrations add much to the work, in the way of ornament, and aid to the imagination. One among them is of terrible power, as it seems to me, such as it would be hard to show the equal of in the work of any modern artist. I mean Holman Hunt's 'Scapegoat.' There is a whole theology in that picture. It haunts me with its fearful suggestiveness like a nightmare. I find 'The Evangel' an impressive and charming book. It does not provoke criticism—it is too devout, too sincere, too thoroughly conscientious in its elaboration to allow of fault-finding or fault-hunting."

William Cullen Bryant:

"I have read 'The Evangel' with pleasure and satisfaction. The

versification of the Lord's Prayer is both an expansion of the sense and a commentary. The thought has often occurred to me what a world of meaning is there wrapped up, and that meaning is admirably brought out."

Henry Woodhull Green, LL. D., (1802–1876), Chief Justice of the Supreme Court of New Jersey from 1846 till 1860, when he became Chancellor:

"TRENTON, N. J.

"ABRAHAM COLES, LL. D., Newark, N. J.:

"MY DEAR SIR—I have read as much of 'The Evangel' during the month since I received it as my leisure and the state of my health have permitted. Of its literary merits, I do not feel myself qualified to judge, but its perusal has given me great pleasure. I have been particularly impressed with the fidelity with which you have adhered to the sacred narrative, unmarred by the decorations of heathen mythology or papal fable. I regard that as no ordinary merit. I can well understand the strong temptation under which a man of high classic culture must, in a work of this kind, constantly labor, to turn from the stern simplicity of the sacred narrative to seek embellishment amid the flowers of classic fiction. To have resisted successfully such temptation, I regard as a very high merit; and I congratulate you on the production of a work, which, I cannot doubt, will redound to your own honor and the honor of OUR STATE. With high regard, I am, very respectfully yours."

Charles H. Spurgeon, writing from Westwood, Beulah Hill, Upper Norwood, speaks of "The Evangel" as "a grand volume," and concludes his affectionate letter with the words:

"Peace be to you, and every blessing. May Scotch Plains be a

spot wherein Jesus dwells with a happy household. Yours very heartily."

The Hon. William Earl Dodge, (1805–1883), merchant and philanthropist, in a letter, written from his residence in New York City, to Dr. Coles:

"Mrs. Dodge and myself have very much enjoyed 'The Evangel,' having carefully read it. Such perfect conformity to the text and spirit of the sacred narrative, so beautifully transferred to verse, we have seldom found."

Thomas Gordon Hake, M. D., author of "Madeline, and Other Poems and Parables":

"12 Portland place,
"West Kensington, W., LONDON.

"I have read 'The Evangel,' and 'The Light of the World,' with deep interest, and with assurance that the learning and intelligence displayed in executing so difficult a work will secure it a lasting place in our joint national literature."

The "New York Observer":

"The skill of Dr. Coles as an artistic poet, his reverent, religious spirit, and the exalted flight of his muse in the regions of holy meditation are familiar to our readers. It is, therefore, superfluous for us to do more than announce a new and elegant volume from his pen—'The Microcosm and Other Poems.' It is rich in its contents. 'The Microcosm' is an essay in verse on the science of the human body; it is literally the science of physiology condensed into 1,400 lines. The many occasional poems that follow are the efflorescence of a mind sensitive to the beautiful and rejoicing in the true; find-

ing God in everything, and delighting to trace the revelation of His love in all the works of His hand. Such a volume is not to be looked at for a moment and then laid aside. Like the great epics, it is a book for all time, and will lose none of its interest and value by the lapse of years. The publishers have given it a splendid dress, and the illustrations add greatly to the attractions of this truly elegant book."

The "New York Times":

"The flavor of the book, 'The Microcosm and Other Poems,' is most quaint, suggesting, on the religious side, George Herbert, and on the naturalistic side, the elder Darwin, who, in 'The Botanic Garden,' laid the seed of the revolution in science, accomplished by the patient genius of his grandson. Some of the hymns for children are beautiful in their simplicity and truth."

"The Critic":

"The long poem, 'The Microcosm,' which gives its name to the present collection, has many beautiful and stately passages. Among the shorter pieces following it, is to be found some of the best devotional and patriotic poetry that has been written in this country."

John Y. Foster, author and editor, in "Frank Leslie's Illustrated Newspaper":

"In this exquisite and brilliantly illustrated volume, the scholarly author has gathered up various children of his pen and grouped them in family unity. 'The Microcosm,' which forms one-fifth of the volume of 350 pages, is an attempt to present, in poetical form, a compendium of the science of the human body. In originality of conception and felicity of expression, it has not been approached by any work of our best modern poets. The other poems are all marked by the highest poetic taste, having passages of great beauty and power."

Hon. Justin McCarthy:

"20 Cheyne Garden, Chelsea, LONDON, England.

"DEAR DR. COLES—I am surprised to see, in looking through your volume, 'The Microcosm and Other Poems,' that you have been able to add three more versions to those you have already made of that wonderful Latin hymn, perhaps the greatest of all, 'Dies Iræ.' Certainly it is one of the most difficult to translate. I like your last version especially."

The "Examiner and Chronicle":

"The title-poem in this exquisitely printed and charmingly illustrated volume, 'The Microcosm and Other Poems,' has been for some time before the public, and has received generous commendation for the tact and skill evinced in handling a very unpromising theme. A poetic description, minute and thorough going of the human body was a serious undertaking; but Dr. Coles delights in what is difficult and hazardous. He had already associated his name forever with the mediæval Latin hymn, 'Dies Iræ,' by publishing no less than thirteen distinct versions of it. In the volume before us he gives us three more versions. The other poems will not detract from the author's previous reputation."

Hon. Horace N. Congar, lawyer, editor, United States Consul at Hong Kong, China, under President Lincoln; and Consul at Prague, Bohemia, under President Grant:

"United States Consulate,

"PRAGUE, Bohemia.

"There is one thing, my dear Doctor, about your publications which no one can deny. You print your own poetical thoughts and conceptions. They are not copies of some other writer, but stand

out clear and distinct with your own diction and strength; written for the scholarly and intelligent, they preserve true simplicity with the real grandeur of their conception."

The Rev. William Hague, D. D. (1808-1887), in "Life Notes; or Fifty Years' Outlook":

"The (Newark) 'Advertiser' yet lives and thrives, winning to its service the contributions of scholarly writers, among whom we have noticed, occasionally, the veteran physician and poet, Dr. Abraham Coles, author of 'The Evangel' with its immense wealth of critical scholasticism; and the tasteful and rhythmic translator of Latin poetry that enriches our libraries, for instance, in the artistically wrought edition of the 'Dies Iræ.'"

The "Newark Daily Advertiser":

"'The Microcosm' is the only book of the kind in the language, and is well deserving of a place in every library, and might, we think, moreover, be introduced with advantage into all *schools* where *physiology* is taught as an adjunct, if nothing else, to stimulate interest, and relieve the dryness of ordinary text books. In lines of flowing and easy verse, the author sets forth with a completeness certainly remarkable, and with great power and beauty the incomparable marvels of structure and function of the human body.

"This poetic mastery, making ductile the most unpromising materials, has had its latest and supreme exemplification in the completion of the unique work, 'The Life and Teachings of Our Lord, in Verse.' 'The Evangel,' forming the first part, appeared in 1874, 'The Light of the World,' forming the second part and completing the work, is now, 1884, first published. * * *

"By common consent the story of the life of Jesus, as told by the four evangelists, is the unmatched masterpiece of literature.

Its literary interest is hardly inferior to its religious. It is pre-eminently classic. The most fervid encomiums have come from infidels and the great literary artists of the world. To taboo it, therefore, as something outside of literature, betrays ignorance and imbecility. Mr. Edwin Arnold has duly celebrated in his poem, 'The Light of Asia,' the Buddhist hero, Prince Siddartha, and has had, it would seem, readers among all classes. The life and teachings of Him who is 'The Light of the World,' and whose fame fills the ages, are surely not less worthy of regard and study by the cultivators of literature. The author has striven, it would seem, to make his book a veritable cyclopædia of religious knowledge, so comprehensive is its scope. It ranges through the Old Testament and the New. An episode in the first part, outlines nearly the whole history of the Jewish people. The poetical proem and the note appended thereto are in effective antagonism to Darwinism and current evolution theories. An elaborate note on 'The Logos' gives an historical summary of the prevailing creeds and christologies from the earliest times.

"It is not too much to say that it is a book deserving of a place beside the New Testament in every household, and cannot fail to be found a valuable help to every reader and student of the sacred Scriptures."

The Rev. George Dana Boardman, D. D.:

"PHILADELPHIA, Pa.

"MY DEAR DOCTOR COLES—Most happy do I count myself in possessing 'The Light of the World.' It has all those same fine characteristics which so richly mark 'The Evangel.' It must be a source of supreme delight to the accomplished author that he has been permitted to complete a work so lofty in design, and so admirable in execution."

Rev. Alfred Spencer Patton, D. D. (1825–1888), author, editor of "The Baptist Weekly," etc.:

"Our good and gifted friend, Dr. Abraham Coles, has every reason to be gratified with the highly complimentary notices by the press, of his last work, 'The Light of the World,' it being the second volume or completion of his life of Jesus, as told by the evangelists."

The Hon. Joseph P. Bradley, LL. D., one of the Justices of the Supreme Court of the United States:

"WASHINGTON, D. C., Dec. 14, 1884.

"DEAR DOCTOR—I have read nearly all of your beautiful book, 'The Life and Teachings of Our Lord, in Verse,' and like it better the longer I read it. You had two rocks to avoid: on one side *prosaic tameness*, which might be incurred by too rigid an adherence to the text; on the other *rashness* in attempting (even poetical) changes of consecrated forms of expression—changes which no English or American ear would endure. I appreciate the difficulty of the task, and think you have performed it wonderfully well."

John G. Whittier:

"AMESBURY, Mass., January, 1885.

"'The Light of the World' I have read with interest. Thy poetical version of the wonderful narrative seems to be conscientiously faithful to the original, while at the same time it successfully interprets some passages which are not clear to the ordinary reader. It will be a helpful book to many, who will realize, for the first time, the true meaning and significance of the Lord's words. I am, with high respect and esteem, thy friend."

The Right Honorable John Bright, M. P., England:

"132 Picadilly, LONDON, April 30, 1885.

"DEAR DR. COLES—When I began to read your volume on 'The Life and Teachings of Christ in Verse,' I thought you had attempted to gild the refined gold, and would fail—as I proceeded in my reading that idea gradually disappeared, and I discovered that you had brought the refined gold together in a manner convenient and useful and deeply interesting. I have read the volume with all its notes, many of which seem to me of great value. I could envy you the learning and the industry that have enabled you to produce this remarkable work. I hope it may have many readers in all countries where our language is spoken."

The Rev. Henry Griggs Weston, D. D., author and editor, President of the Crozer Theological Seminary, Chester, Pennsylvania:

"Your work, 'The Life and Teachings of Our Lord,' is one of the gratifying fruits of the study which the Gospels have received since I first began to inquire for helps to their understanding."

The Rev. Horatius Bonar, D. D.:

"10 Palmerston Road, Grange, EDINBURGH.

* * * * "I am struck with your command of language, and your skill in clothing the simplicities of history with the elegance of poetry. It ('The Life and Teachings of Our Lord in Verse') is no ordinary volume, and your notes are of a very high order indeed—admirably written, and full of philosophical thought and Scriptural research."

The Rev. Alexander McLaren, D. D.:

"MANCHESTER, Eng., Nov. 3, 1885.

"DEAR SIR—I congratulate you on having accomplished with such success a most difficult undertaking; and on having been able to present the inexhaustible life in a form so new and original. I do not know whether I have been most struck by the careful and fine exegetical study, or the graceful versification of your work. I trust it ('The Life and Teachings of Our Lord in Verse') may be useful, not only in attracting the people, which George Herbert thought could be caught with a song, when they would run from a sermon, but may also help lovers of the sermon to see its subject in a new garb."

Adele M. Fielde, missionary at Swatow, China:

"Those whose judgment is of value have given Dr. Coles' translations of the Latin hymns such high praise, that words of commendation from me would appear presumptuous. I am glad, for the world's sake, that the wonderful Latin hymns were written, and that Dr. Coles has so translated them, and I am glad for my own sake that I have them to read. * * * * I think Dr. Coles has done an excellent thing for us in his 'Life and Teachings of Our Lord.'"

Elizabeth Clementine Kinney, author and poet, wife of Hon. William Burnet Kinney; and, by her first husband, Edmund B. Stedman, the mother of Edmund Clarence Stedman, the distinguished poet and critic:

"Dr. Coles long ago established a high reputation in both worlds, by his matchless translations of that famous old judgment hymn, the 'Dies Iræ,' and of mediæval hymns, published under the title of 'Old Gems in New Settings;' also by his unique original poem,

'The Microcosm,' which has glorified by immortal verse this mortal body, so fearfully and wonderfully made that every part harmonizes with the poet's song. In 'The Evangel' and 'The Light of the World,' already noticed by 'The Observer,' while conscientiously adhering to the sacred text, Dr. Coles' frequent elaborate notes give freedom to some original suggestions growing out of the author's fifty years' devout study of the Bible. It will be well to heed any proposition brought forward by one who has been so long a reverent student as to have become a profound thinker, and thus an able teacher of the divine word. Every thought or idea advanced by Dr. Coles will, doubtless, on thorough, unprejudiced investigation, be found supported by a reasonable interpretation of Scripture. Between the acts of this sacred drama there are also some hymnal excursions, which show the height and depth, the color and light, the melody and ecstasy, of the true Christian poet. Through his many works, one noble aim is ever apparent, viz.: to 'crown Him Lord of all' who is 'the author and finisher of our faith' and 'the giver of every good and perfect gift.' Noticeable, too, through all, is progression, in respect of enlargement by study and thought; of advancement with advancing years, keeping pace with the age in increasing light so far as it develops heavenly truth, and original conception through truth."

"The Book Buyer," Charles Scribner's Sons, New York:

"'The Hebrew Psalms in English Verse.' By Abraham Coles, M. D., LL.D. Dr. Coles has won praise from some of the most eminent of critics for his translations into English of the 'Dies Iræ,' the characteristics of the work being faithfulness to the spirit of the original, combined with a command of rich and rythmic English. His tastes have led him to translate the great Hebrew classic into English verse, a task of unusual difficulty which many have

undertaken, but in which few have attained even partial success. Dr. Coles's work will attract wide attention by reason of its lofty religious spirit, its admirable reflection of the incomparably fine flavor of the original, its dignified, stately diction and the scholarly care bestowed upon every line. The book, moreover, has an additional value in the prefatory matter which includes an essay on the character of the Psalms, a detailed account of the French, English and Scotch metrical versions of the Psalms and a chapter of interesting notes, critical, historical and biographical. An admirable steel portrait of Dr. Coles serves as a frontispiece to the book."

Rev. Theodore L. Cuyler, D. D., LL. D.:

"DEAR DR. COLES—Your volume on the Psalms is a noble work, and the introduction is rich and sweet as a honeycomb. Two Sabbaths ago I gave out from my pulpit your fine hymn, 'Lo, I am with you all the days,' and told the congregation some things about the author. * * * * You will be quite at home up among heaven's choir of psalmists and chosen singers."

The "New York Tribune":

"'A New Rendering of the Hebrew Psalms into English Verse, with Notes, Critical, Historical and Biographical, including an Historical Sketch of the French, English and Scotch Metrical Versions,' by Dr. Abraham Coles. Dr. Coles' name on the title-page is a sufficient indication of the excellence and thoroughness of the work done. Indeed, Dr. Coles has done much more than produce a fresh, vigorous and harmonious version of the Psalms, though this was alone well worth doing. His full and scholarly notes on the early versions of Clement Marot, Sternhold and Hopkins and others, his sketches of eminent persons connected in various ways with particular psalms, his literary and bibliographical

information, together impart a value and interest to this work which should insure an extensive circulation for it. Very much of the historical and other matter thus brought within the reach of the public is inaccessible to such as have not means of access to public libraries, and there is certainly no Christian household in the country which would not find both pleasure and instruction in Dr. Coles' compendious and altogether unique volume. It may be added that in his version of the Psalms he has wisely preserved the rhythmical swing and the terse language which distinguish the early renderings, and that therefore those who have been reared on the old versions need not fear finding their favorites changed 'out of knowledge.'"

The Rev. Frederic W. Farrar, D. D., F. R. S., Chaplain in Ordinary to the Queen, author of the "Life of Christ," etc., in a letter to Dr. Coles:

"17, Dean's Yard, WESTMINSTER, S. W.

"The task of versifying the Psalms was too much even for Milton, but you have attempted it with seriousness and with as much success as seems to be possible. I was much interested in your introduction."

The Rev. A. H. Tuttle, D. D., pastor of the First Methodist Episcopal Church, Wilkesbarre, Pa.:

"'The Life and Teachings of Our Lord, in verse,' has greatly aided me in my efforts to interpret heavenly things. I am glad you have lived to complete your versification of the Psalms. I am now making a protracted and careful study of the old Hebrew Hymn Book, and your work will be of untold help to me. I have already read my favorite psalms as you sing them. They are rich beyond expression."

The Rev. Charles S. Robinson, D. D.:

"I have read many of your really excellent versions of the Psalms. It seems to me you have added richly to our available literature in that direction. I have been specially interested, also, in the prefaced notes. Some of the information is quite new to me, and the comments are all good and helpful."

Hon. George Hay Stuart, the eminent philanthropist in January, 1888, wrote from Philadelphia:

"'The New Rendering of the Hebrew Psalms into English Verse,' I prize very much. It is exceedingly good and very suggestive. The subject matter is of peculiar interest to me. I have been brought up, as perhaps you know, in old Rouse's version of the Psalms, but never held the view, that many do, that nothing else can be sung in the praise of God. Our own congregation, up to recently, used nothing but that version. Now we have so far advanced that we sing, also, hymns and spiritual songs. * * * * The United Presbyterian Assembly has recently adopted a new version of the Psalms, but I think their leading men ought to see this version."

The Rev. D. R. Frazer, D. D., pastor of the First Presbyterian Church, of Newark, N. J.:

"My Dear Dr. Coles—I do not know that I can give any better expression of my appreciation of your last work than to say that my wife and I sat up until after midnight, reading psalm after psalm with very great delight. The versification is beautiful, and its beauty intensifies by its fidelity to the common version. Hoping the book may do much good, in making manifest the beauties of one of the most beautiful portions of the Word of God, I am, with great respect, ever sincerely yours."

Charles M. Davis, Secretary of the American Institute of Christian Philosophy, Superintendent of Public Schools, Essex county, N. J., etc.:

"DEAR DR. COLES—During the past year I have been reading the revised version of the Psalms, in connection with the received. Your translations will be a help to me, as I do not understand Hebrew. I have read your introduction very carefully, and find it contains especially valuable information, as do, also, your occasional notes. The psalms that I have read aloud in the family have been greatly enjoyed, especially the 107th, 136th and 137th. We are anticipating much pleasure from the continuance of this during the winter evenings."

The Rev. A. H. Lewis, D. D., editor of "The Outlook and Sabbath Quarterly":

"I have been greatly interested in the book, not only in the success which you have attained in versifying the Psalms, but in the valuable matter embodied in the introduction. I have usually found it difficult to interest myself in any versification of the Psalms, especially in the early efforts by Watts and others. On opening your volume, I found myself inclined to read in detail, rather than to examine cursorily. It is very difficult to versify Hebrew poetry. The success you have attained in expressing the delicate shades of sentiment commands our congratulations, and may justly give you abundant satisfaction."

S. W. Kershaw, F. S. A., author, librarian of the Lambeth Palace Library, London, England, etc.:

"LAMBETH LIBRARY, 12 June, 1888.

"* * * * In this library there is a fine collection of works on the liturgies, prayer-book, etc. In your 'New Rendering of the

Hebrew Psalms Into English Verse,' I am greatly interested in the introduction, in reading about the psalms of Clement Marot, and in the allusion to the Huguenots. My little book on the 'Protestants from France in their English home' was kindly reviewed in one of your papers. * * * *"

J. K. Hoyt, editor and author:

"Bay View, Florida.

"Dear Dr. Coles—I have passed a very pleasant Sunday morning in looking over your new book. I wish you had invoked the spirit of Beethoven, and written the music as well as the words; for the proper use of a metrical version of the Psalms is to sing them. Still, the book is a wonderful one, and encourages me to believe that age is not necessarily a bar to work. I enjoy the notes much, and very often find myself turning from the essay to the verses referred to. You will leave a melodious monument behind you, my good Doctor."

The Rev. George Dana Boardman, D. D.:

"My Dear Dr. Coles—I greatly admire your new book for many reasons: first, for its rich introduction, felicitously describing the character of the Psalms, giving us an exhaustive history of metrical versions, presenting critical, historical and biographical notes of great value; secondly, for your new rendering of the Psalms, a rendering conscientious, mellifluous, fresh and suggestive; thirdly, and not least, for the frontispiece, representing one who has both the David spirit and the David music. Faithfully yours."

The Rev. Lewis R. Dunn, D. D.:

"I like the 'rhythmic flow' of the words of your work, its truths, its thorough orthodoxy, its blending of the results of most recent scholarship in lines and notes, its beautiful illustrations of the text, and its high intellectual and spiritual tone—a classic in our good old English tongue."

Asahel Clark Kendrick, D. D., LL. D., author, Professor of Hebrew, Greek and Latin in the University of Rochester, New York:

"In your translation of the Hebrew Psalms into English verse, you may well be congratulated in having thus nobly crowned your series of poems devoted to those themes, which aid the aspirations of the soul upward toward God and heaven, and may well task the highest human efforts. The renderings are in clear and weighty verse, fitted to the noble simplicity of the original; and the notes are instructive and valuable."

George MacDonald, author and poet:

"London, England.

"My dear Doctor Coles.—I send you by this post a copy of my little book on the religious poetry of England. I am sure you will find a good deal to sympathize with in it. * * * I am sorry to say I have not yet received your book, which I should like much to see after the taste you gave me, sheltered and ministered unto by you and yours. Let me hope I may once more be your guest, and that you may be ours. Believe in my love and gratitude. Yours, with sincere affection."

The Rev. Philip Schaff, D. D., LL. D., in "Literature and Poetry," Charles Scribner's Sons, New York, 1890:

"A physician, Abraham Coles, prepared between 1847 and 1859 thirteen versions (of the 'Dies Iræ'), six of which are in the trochaic measure and double rhyme of the original, five in the same rhythm, but in single rhyme, one in iambic triplets, like Roscommon's, the last in quatrains, like Crashaw's version. Two appeared anonymously in the Newark 'Daily Advertiser,' the first one in 1847, and a part of it found its way into Mrs. Stowe's 'Uncle Tom's Cabin;' subsequently this version was set to music in Henry Ward Beecher's 'Plymouth Collection of Hymns and Tunes.' The thirteen versions were first published together with an introduction in 1859. He has since published three additional versions in double rhyme, New York, 1881, in 'The Microcosm and Other Poems.' In August, 1889, he made one more version in single rhyme and four lines. These seventeen versions show a rare fertility and versatility, and illustrate the possibilities of variation, without altering the sense. Dr. Coles, in the eleventh stanza of his first translation of 1847, had anticipated Irons, Périès, and Dix:

"'Righteous Judge of retribution,
Make me gift of absolution
Ere that day of execution.'

* * * "Dr. Abraham Coles, of Scotch Plains, N. J., the successful translator of 'Dies Iræ,' and 'Stabat Mater,' has reproduced, but has not yet (1889), published, all the passion hymns of St. Bernard."

From the New York "Tribune":

"Dr. Abraham Coles, who died suddenly at the Hotel del Monte, near Monterey, California, May 3, 1891, from heart complication following an attack of La Grippe, was widely known as a scholar, author and linguist. He was born at Scotch Plains, N. J., December 26, 1813, and spent the last years of his life there on his beautiful place (Deerhurst), which was much resorted to by literary and professional people. For more than fifty years he pursued his literary studies and work, and became proficient in Greek, Latin, Hebrew, Sanskrit and the modern languages."

From the "Newark Daily Advertiser":

"As one of the founders of the Newark Library, and the New Jersey Historical Society, and on account of his active efforts in the promotion of the religious, educational and scientific development of the city of Newark, the memory of Dr. Abraham Coles will be cherished with lasting affection and respect.

The Rev. Robert S. MacArthur, D. D.:

"Few men have recently died whose position and work were so unique as those of Dr. Abraham Coles. Seldom are so many elements of power united in a single man. He was a distinguished member of the medical profession. His poetical genius was as rare as it was genuine. There is no kind of literary fame so enduring as the authorship of a noble hymn. As the author of the hymn beginning, 'From Thee Begetting Sure Conviction,' his name will live, even as he has described the presence of the Master as continuing with His people, 'All the Days. All the Days.' We sang that hymn in the Calvary Church when we first entered our new church home. We sing it on many of our anniversary occasions. Other hymns which he has written are doubtless equally as good, but this one has for me a peculiar charm.

"Many of his translations of the Psalms are worthy to perpetuate his name to remote generations. I love to read them aloud that I may get the full force of their rhythm, as well as the sweet influence of their divine thought. His knowledge of general literature and especially of Latin hymnology gives him a special place in the thought and affection of students of the early days of the Christian Church."

The Rev. Edward Judson, D. D.:

"I loved and admired Dr. Abraham Coles very much. I have read with deepest interest whatever I have been able to secure from his graceful pen. His rendering of the Psalms I prize most highly."

Bishop John H. Vincent, D. D., LL. D., Chancellor of the Chautauqua University:

"Dr. Abraham Coles was a magnificent man, physically, intellectually and spiritually; he was one among ten thousand. Who can doubt the great doctrine of immortality in the presence of such a life."

The Rt. Rev. Phillips Brooks, D. D., LL. D., Bishop of the Diocese of Massachusetts:

"All that concerns Dr. Abraham Coles is of great interest to me, for I have long known his work and valued it."

The Rt. Rev. John Williams, D. D., LL. .D, Bishop of the Diocese of Connecticut, Chancellor of Trinity College, etc.:

"I honored and reverenced Dr. Abraham Coles. I always read his delightful writings with pleasure and profit. There was an aroma of purity and godly grace about them that was particularly attractive. The world is richer for such a life as his, and poorer for his loss."

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